

THE NEW SATELLITE

BY VARGO STATTON



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a Seion scientific novel

The New Satellite

By

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THE MICRO MEN
PETRIFIED PLANET
THE DEVOURING FIRE

*All characters in this story are entirely imaginary
and have no connection with, or reference to, any
person living or dead.*

CHAPTER ONE

The Great Earthquake of February 9th, 1970, began at exactly 3.10 p.m., and persisted, unlike all earthquakes before it, for twenty-eight minutes. In that time Earth rocked and swayed as though it were a rubber ball at the end of an elastic. Thanks to the mighty construction of modern cities, the damage was not as severe as it would otherwise have been, but even so, the death roll was high. When the upheaval ceased there was not the usual second 'quake of less force—only a vast and perplexing stillness with all trace of disturbance completely gone.

This, evidently, had been no normal earthquake. In every part of the world, even in zones considered to be immune, the monstrous swaying had occurred. Oceans had spilled over like agitated bowls of water; less strongly constructed towns had flattened like packs of cards. Fire, shattered communications, floods, and then vast tempests whipped and lashed around the world. It was February 18th before the last echoes of the disaster began to die away and the survivors could take stock.

At least a good deal was saved. The astronomers had seen it coming and, though not entirely sure of what would happen, they had done their best to advise the various Governments of the world that a violent earthquake was possible at any time.

The first clue had been found on top of Mount Wilson in California. Here there existed the mighty 900-inch telescope-reflector, largest in the world and twice as powerful as earlier instruments. Here, in the main observatory, it had been noted — and thence radioed throughout the world

— that Mercury, the planet nearest the sun, had turned mysteriously red and then cracked up. It was upon his dissolution, a strange and inexplicable thing, that the possibility of a violent earthquake, due to changing equilibrium, had been urgently transmitted to all Governments and the public at large. And now, a fortnight later, the two Mount Wilson scientists who had been the first to foretell disaster, were again giving the heavens a routine check-up.

There was no doubt about one thing now: Mercury had entirely disappeared. The dead, erratic little world which had normally spun in an eccentric orbit 35-million miles from the sun, was no more.

"Which confirms our beliefs when we saw signs of him breaking up after first turning red," commented Dr. Willoughby, curator of the Observatory, thoughtfully.

"What do you suppose *made* him smash up like that?" asked his fellow astronomer, frowning. "Quite a remarkable thing, and certainly one that never happened before in *our* System, anyway."

"Worlds die," Willoughby answered. "It just happened. I can't see any other explanation."

None the less the matter of the break-up had plunged him into profound speculations. He went across to his notebook and examined it thoughtfully. Garside, his companion, again adjusted the controls of the reflector and studied the screen which filled practically all the enormous observatory floor. In fact, the screen resembled a small lake, its surface made of dustless, highly polished atomercury. It gave the maximum of detail with the minimum of eye-hurting brilliance. And at the moment it revealed the starry *infinities*.

"There is no doubt," Willoughby said, glancing up from his spot-lit notes, "that the disappearance of Mercury caused the great earthquake. Though by no means a large body it was of sufficient mass to cause a change in balance throughout the entire Solar System. Presumably every planet in the System suffered in the same way . . . We can soon find out."

And thereupon, with their delicate instruments, the two astronomers set to work to chart the behaviour of all the worlds in the System, from Venus to farthest Pluto — and before their night's spell of duty was through they had discovered enough to satisfy them that every planet was displaced from its former position in the scheme of things. The disappearance of Mercury had undoubtedly created a new balance, which fact was confirmed by all scientific bodies as a whole.

The public, when the information was received, was more irritated than satisfied. With half civilisation in ruins and hardly a man or woman not mourning somebody, a few cold facts and figures were not much consolation — but they had to suffice, for the scientists had passed on to the greater problem of *why* Mercury had disappeared. Here was something likely to keep every astronomer busy for a long time to come. Presumably the shattered planet had been drawn into the sun, being so close to it, but since Mercury had been in its crazy orbit for immemorial time why had it suddenly split up and then disappeared? Every scientist gave this a good deal of thought, and not only scientists. Chief-Pilot Frank Hurst, for instance, of the Transatlantic Air Mail, found a good deal in the mystery to absorb him.

Hurst had probably more reason than most "ordinary" men to speculate on the problem of Mercury's departure since astronomy was his hobby, and in the many hours of flying he was forced to make he had the chance to sit and think a good deal. Also he was not earthbound, and from his lofty perch in the skies could view the heavens unhindered.

"I have the idea it has something to do with the colouring," he commented. "Maybe the astronomers have thought of that too, though I haven't heard any of them mention it."

This observation, without the ghost of a build-up, made co-pilot Dick Meredith glance from his charts in surprise. As usual, he and Frank Hurst were at the controls of their

machine, hurtling through the night with the Anglo-American mail.

"Come again," Dick Meredith invited, and gave his instruments a routine check-up.

Frank was gazing into the night. "The colour," he repeated, musing.

"Yes, I know. That's what you said before — but I haven't the vaguest idea what you're talking about. However, if it relieves you to talk, don't mind me."

There was an interval, the massive motors of the 'plane droning rhythmically. Frank still kept on gazing through the bowed outlook window, and finally he nodded his head to the view outside.

"I'm talking about the moon," he explained. "Look at it! When did you last see a moon like that?"

More out of politeness than anything else Dick Meredith took a glance. His interest in astronomy did not extend beyond the limits required for his job: certainly he would never have taken a second glance at the sky in the ordinary way. This time, however, he did notice that the moon was changed from its normal white brilliance with black streaks and spots. For some reason it had turned red, just as if it were blushing.

"Look at it!" Frank insisted. "Red as a harvest moon, and in the middle of February. Up here at this height it ought to be silver — No heat-vibrations interfering as there are with the September moon seen from the ground. And look at the lunar surface! Cracked from pole to pole with zig-zag lines . . . I'll swear that red colour has something to do with it. The moon's never looked like that before in all its history."

"Just as though it's in the midst of an eclipse," Dick responded. "That turns it coppery-red — umbra shadow. Do you suppose the scientists have slipped up and missed a lunar eclipse in their calculations?"

"I don't suppose anything so crazy. And that isn't the same shade as an eclipse either."

"Only explanation can be the one I heard put out on the

news-casts this morning," Dick decided. "Some of the high-up astronomers say that the blood-red colour of the moon is due to dust in the higher atmosphere caused by the volcanic eruptions which accompanied the Great Earthquake. What they neglect to mention is that the sun ought to look the same shade by day — only it doesn't. Probably a story put out to please the public while they hunt for the right answer."

"Could be," Frank agreed; then he added sourly: "Dust be damned! Look at the distant stars! White and brilliant as ever. They too would be the same colour if a dust-veil were the cause."

"Mmmm—I suppose so." Dick stifled a slight yawn—a yawn begotten of monotony, in fact. He didn't pursue the subject of the blushing moon any further because he had exhausted the subject. Besides, it demanded mental effort, and Dick preferred comfort. In contrast to the angular-featured Frank with his keen intelligence, Dick was a heavy-built young man of twenty-eight, round-faced and cushion-chinned.

"I think you're making a mountain out of a moonhill," he misquoted at length, squinting again at the moon. "I don't want to find fault with your superior brain, but wouldn't a sudden deposit of copper dust from outer space onto the moon's surface cause just that reddish colour?"

"I suppose so — but it wouldn't account for the cracks and chasms which are gaping in the surface. Here, two hundred and forty thousand miles away, they only look like lines — but in actuality they must be far bigger than the Grand Canyon."

"All of which adds up to what?"

"Well, I—" Frank broke off and glanced around sharply as the emergency radio, always set ready for action apart from the normal apparatus, burst into sudden life.

"Attention all listeners! Attention! Warning has been received from the world's observatories that the Moon is in a state of advanced disintegration and might at any moment break up. Take cover, underground wherever pos-

sible. All ships will return to port and all aircraft to their nearest station — immediately."

"Can't take his word for it about returning to base," Frank said briefly, his brows knitted. "See what they say at the base, will you?"

Dick nodded and switched on. He hardly had time to identify himself before base headquarters answered: "Come in as fast as you can."

"Evidently something in it," Frank said, with another glance at the sky. "Do you remember the scientists reporting that, according to their colour plates Mercury turned a vivid red before breaking up? Now the moon is the same colour and apparently it too is going to disintegrate. There'll be some real fun when it does! Then take Mars. Also red, with black streaks, but of course he's been like that for ages. Then there's Jupiter with a Red Spot eighteen hundred miles across. All of which seems to add up to something mighty unpleasant."

Dick did not make any comment. He cast one glance at the sinister moon and then returned his attention to his instruments.

Outside, the winter darkness was alleviated only by the glow of the satellite. Below, the British Isles were commencing to come into view, sprawled in spotted light amidst the woolly grey which was the Atlantic. The night was fine and clear with a tinge of frost. On the beam signal the "Come In" light was quivering on the vertical bar.

"Look, Dick. I've worked out a theory——" Frank was speaking again, so Dick glanced at him. "I'd like to try it out on you to see how it sounds."

"Sure thing, but don't expect brilliant answers. The thought of the moon breaking up has me worried. Anyway, I don't go for science in a big way like you do."

"Which is one reason why I'm choosing you. If you can understand what I mean then maybe there's something in it. I think, to put it briefly, that the change in colour is the forerunner of actual collapse. Didn't you notice the Atlantic

as we crossed it during the daylight hours? There was a coppery flush over the water's surface."

"There was? I'm afraid it looked like the same old grey drink to me."

"It *was* there and I saw it," Frank stated dogmatically. "In fact you can see the effect on the land even now—— Look at the British Isles there! The lights are *orange*, not white. Same with the directional beam showing us the position of the airport."

Dick peered below and then turned again.

"Yes, I can see it, but it could be denser air or a fog belt—— For heaven's sake, man, stop worrying!" he broke off. "Aren't things bad enough when we're told the moon may crack up at any moment without you hunting for further headaches? We have——"

He broke off, glancing upwards in alarm. Suddenly everywhere outside had become filled with quivering, wavering shadows and the starry sky was splashed with multi-coloured lights.

"It's come!" Frank cried hoarsely, staring through the port. "The moon's cracked up!"

There was no doubt about it. Vast chasms in the moon's face had now split into widening canyons of darkness as the solid portions shot away from each other and revealed the total dark of the void behind. Soundlessly, mighty masses hurtled outwards into space. Several of them, all shining by the reflected light of the unseen sun, immediately increased in size as they were drawn by Earth's attraction. Down below the 'plane the sea and landscape were a confused pattern of changing lights and zig-zagging shadows.

"Speed!" Frank gasped. "It's our only chance!"

He slammed in the power levers and the droning motors increased their noise still further, being flogged to a limit which Frank, in the normal way, took good care to avoid. With a tremendous surge the 'plane hurtled through the incredible scummy sky; but no more than twenty miles were covered before the first effects of the lunar disintegration

began to become evident. Colossal air disturbances and gravitational shifts caught the flyer in an atmospheric tidal wave and flung it through a tempest which had suddenly come screaming down from the upper heights.

In a matter of seconds the calm frostiness of the February night had gone. Instead there was a cyclone of ever-increasing fury and a battering onslaught of rain which swilled against the observation windows. Lightning whiplashed through the tempest, playing viciously upon the flyer's metalwork. Nor was it all lightning. Balls of fire occasionally flashed out of the murk, and they could not be anything else but meteorites, the first riven chunks of the shattered satellite.

Frank clung to the controls as the aircraft pitched crazily. His face was set and sweating. He stared fixedly through an observation window now nearly opaque with lashing rain.

Dick switched on the radio. The voice which came through was warped and reedy with violent static interference.

"Repeating warning! All aircraft return to base immediately! Attention all——"

Dick switched off. The voice had been coming from London airport, towards which they were trying to head. Struck by a thought Dick switched on again and swung the tuner so that he combed Earth in a medley of stations, most of them having abandoned their normal programmes and instead issuing frantic exhortations to the populace to seek shelter. French, Italian, German, Russian, American—issuing the same order—"Take cover!"

"Pretty bad," Dick commented, switching off. "They haven't been slow to realise what's happened which is one good thing."

"Pity if they couldn't after being given warning," Frank muttered, busy with the controls.

He was, at this moment, measuring seconds to eternity. This blind flying, for the instruments were haywire in the electrical disturbances, led straight to destruction if he made

one miscalculation. All he could rely on with his skill as a pilot and his knowledge of the immediate surroundings. He had come down to London airport in all kinds of weather and knew every inch of the route. If ever there was a time when he must prove it it was now.

Finishing the final hop to London airport was like running the gauntlet of a super-blitz. Small and large rocks were hurtling through the air as sizzling pieces of incandescence. That none hit the 'plane was not a miracle, since compared to the emptiness around it it was like a fly in the midst of a ballroom, and just as difficult to strike at random.

Below, through the whirling confusion as the machine dropped ever lower, there were transient glimpses of towns in flames, or the livid flashings of massive explosions as meteorites dropped with terrific impact. Just what kind of a hell was raging down there the two pilots could only hazard. They could not imagine anything much worse than the sudden white-hot avalanche from the raging sky.

Then, at long last, there emerged from the blurred confusion the flare paths of the London airport which, so far, had evidently survived. With difficulty Frank brought the 'plane down whilst Dick fumbled with the cabin door. He snapped it open and a screaming wind with drenching rain came sweeping into the control room.

Together, heads bent against the tempest, the two men floundered across the water-sodden runway to the base building. Officers, radio operators, navigators, pilots—all turned expectantly as the two men tumbled into the great briefing room amidst a deluge of raindrops. Dick pressed his ponderous bulk against the door and with a constrained effort managed to close it. Abruptly, with the scream of the hurricane shut out, everything seemed intensely quiet.

"Well, you made it," commented the chief operator at length—and he gave a grim nod as he spoke towards the giant official television screen.

Wiping the rain from their faces and loosening their flying jackets, Frank and Dick studied the screens intently, finally standing appalled at the vision flashing in succession

to them as the operator changed the wave-lengths. In relentless parade were views of cities, chiefly in Britain and America. On the other side of the Atlantic, Columbus, Louisville, and Minneapolis were all flaming, crumbling ruin. In Europe, Paris, Berlin, and Moscow were filled with surging, half demented people fleeing from the terror of devouring fire and crashing meteorites.

"It looks——" the chief radio operator started to say; then he got no further for the second Great Earthquake came.

It was as though the huge airport building were on the end of a string and being swung violently through space. The men were flung from their chairs to the floor and Frank and Dick pitched on top of each other. Instruments tinkled and broke; glass windows and indicator faces shattered. Masses of steel broke from the corners of the lofty ceiling and the walls gaped and bulged. Through the fissures the wind howled in devilish fury. Through it all beat the deeper bass of the tortured planet as it swayed and reeled into a new state of balance now the factor of the moon's mass had been removed from the mathematical order of things.

Perhaps the earthquake lasted ten minutes — perhaps thirty. None of the men grovelling on the floor striving to protect themselves under the heavy furniture—particularly the tables—could be certain. They only became aware gradually of a slow cessation in the sickly movement. Things were solid again, but the gaping walls and the rain and wind battering through them testified as to what had happened. The lights had expired too, but they returned again as the emergency circuit came into operation.

The chief radio operator surveyed his shattered instruments and sighed. He looked around on the men slowly getting to their feet.

"As I was about to say," he said. "It looked, from the last view we had on the televisior, as though most places turned towards the moon got the works, including us. The radio's dead, I'm afraid. No chance of news from elsewhere at the moment to see how they've fared."

"I've seen enough anyway," Frank said, tight-lipped. "I saw all this coming and I——"

He turned as the Airport's C.O. came in. He was a tall, thin man, completely without emotion even in this crisis. Most of the men under his command said he had a card-index for a heart. Despite his imperturbability, however, there was on this occasion more than a hint of smouldering anger in his voice.

"Only the very briefest of warnings before all this happened!" he exclaimed. "It's a disgrace! Scientists ought to have known months ago. Our schedules are hopelessly disorganised and there are heaven knows how many dead and injured, which means," he finished, "that all the work is pushed onto us."

"Brief though the warning was, sir, it *was* given," Frank pointed out. "I imagine that the scientists had only just arrived at their conclusions—and that I can easily understand. I'd only just come to forming a theory myself."

"*You* had!" the C.O. exclaimed, his eyes bleak. "Just what do you mean by that?—or do you consider yourself above the scientists?"

"By no means. But I did see the same signs which the scientists must have seen and drew my conclusions."

"I see."

"Even if a longer warning had been given," Frank added, "I doubt if the public would have taken much notice, for the vast majority of men and women, no matter how much they suffer amidst an elemental upheaval, don't take science seriously. Don't forget how apathetic was the reaction to the news that Mercury had vanished, whereas—scientifically—it was a matter of paramount concern. Take another case—the way the public has derided Joseph Blair because he says space travel is possible at any moment. Even in these advanced days of 1970 a new idea takes the devil of a lot of hammering home.

There was silence for a moment in the half ruined room. The comment about Joseph Blair had made things awkward.

All reference to him was supposed to be taboo, especially so in the presence of the razor-edged C.O. Finally he gave a cold, incredulous smile.

"Joseph Blair is a revolutionary," he stated. "He has no place in a regime controlled by Luther Andos, and I'd advise you to remember that fact in future. You are too good an airman, Hurst, to lose your life through careless talk."

Frank shrugged. "Sorry, sir. I'm not supporting Blair the man, and I'm loyal to Luther Andos because he is our ruler. I am not even referring to Blair's efforts to overthrow Andos. It is Blair the *scientist* I am talking about. There couldn't be a cleverer one anywhere."

"Have you quite finished, Hurst?" the C.O. enquired icily.

Frank was silent, waiting for the punishment which he felt sure was going to follow. Instead, however, the C.O. merely jerked his head.

"If there is anything left of the mail get it in," he ordered. "Then stand by. All normal schedules are suspended for the moment."

* * *

Towards dawn the chatterings of the radio and the harrowing scenes of tidal wave and tempest depicted on the telescreens gave place to rather ambiguous statements by a procession of worried-looking announcers.

Seated in a corner of the briefing room, yawning through lack of sleep, Frank and Dick waited. The radio had been more or less restored by tireless maintenance engineers and was now in fair working order again.

"Reports from observatories," said the chief announcer from London, "state that the danger is over. The exact topographical changes will be determined later. It is now safe for those who sought shelter to emerge and commence to repair the damage—All clear!"

"That's what he thinks," Frank said, his face grim.

The C.O., who had spent most of the night amongst the men, glanced across from his chair.

"Why do you say that, Hurst?" he questioned. "Do you still believe you've some exclusive ideas on the matter?"

"I most certainly do, sir." Frank got to his feet stiffly. "I suppose the statement we have just heard has come from the astronomers. I think it's about time they took a look at Mars, and the Great Red Spot of Jupiter, and after that take a look at our so-called solid Earth. Maybe they have done but aren't saying so. You see, it's my guess that Earth will be next to break up and——"

"Ridiculous!" the C.O. protested, and Frank was too tired to be respectful any more. He flared back an answer.

"It isn't ridiculous: it's logical! I base my assumption on the fact that Earth is glowing coppery-red. I've seen that quite clearly from the air."

"That's right enough," a pilot confirmed from a distant corner. "I wondered once or twice what the blazes it might be."

"Probably low ground mist," the C.O. said, with a touch of scorn. "Frankly, Hurst, it has always been a failing of yours to imagine too much."

"If it is a failing, sir," Dick put in. "Sometimes I wish I had some of it! We'd be in a mighty poor way if nobody had powerful imagination. We owe all civilisation to it."

For once the C.O. looked squashed. He cleared his throat and then moved a hand vaguely.

"Only one thing for you to do, Hurst, since you think you have something different from everybody else, and that is tell it to Johnson at the Observatory. After all, I'm only a flying man and not able to discuss science at any length. See Johnson: he'll listen to anything."

The contempt with which the "anything" was uttered brought a glint into Frank's eyes, but he controlled himself as he answered:

"Yes, sir. Probably I will see him——"

"And in the meantime," the C.O. finished, "stand by for

a sudden recall. Unless I'm mistaken we'll have a lot of evacuation work to do before long."

"Then for the moment we can consider ourselves off duty, sir?" Dick questioned.

"Uh-huh. I know where to get in touch with you when I need you. All of you men can disband for the time being."

Frank jerked his head and together he and Dick went out into the fresh morning air. The aspect was different from that to which they were accustomed with the toppled buildings of London in the distance and the mighty smoke clouds drifting to the bright sky. Otherwise the day was normal enough with its vicious sting of frost.

"Well, what happens next?" Dick enquired.

"We have breakfast, shave and freshen up, then before we make tracks for Dr. Johnson at the observatory I've one or two facts to sort out."

"Okay."

Since Frank usually took the lead in all things Dick said no more. He accompanied Frank to their two room bachelor quarters annexed to the airport—and to their satisfaction the apartment-building was still standing, and they went through the routine of freshening up. Then the moment the breakfast was over Frank went to work, surrounded by massive scientific tomes and with a scribbling pad on the table in front of him. Dick, silently clearing the traces of the breakfast, did not make any inquiry as to what was going on. As far as he could see Frank was working out some kind of theory with books of reference to aid him. Which, indeed, he was—and it was an hour and a half before he announced that he was ready.

"Apparently so," Dick grinned, looking at the sheaf of notes. "What in the world is all that information about?"

"You'll find out when I tell it all to Dr. Johnson. It would take too long now."

There was a look on Frank's face which seemed to indicate he had discovered something pretty startling, and throughout the journey to the observatory, perched immovably on solid rock foundations to the north of

London, he made no comments. Most of the time he gazed absently out of the aerotaxi window never seeing the ruins which lay below following the earthquake of the night. But Dick saw them, and the busy ants of people moving around in an effort to clear the debris and recover buried bodies.

So, finally, the aerotaxi touched down in the grounds of the observatory and shortly afterwards the two airmen were admitted into the main charting room with its dome of warpless glass wherein lay the giants of metal and lenses which probed the depths of space.

Dr. Johnson, controller of the observatory, was a short, heavily-built man with white fluff round a bald head. He looked over his shoulder in surprise from examining spectroheliographs as the two fliers were shown in. Men of the air branch were rare visitors. Frank moved forward with extended hand and introduced himself, and then Dick.

"Glad to know you," Dr. Johnson smiled, "though you must forgive me if I look a little puzzled. Visitors here are so rare. The average man's interest in science is virtually nil."

"You don't have to tell me," Frank responded. "And since I am here to expound a theory, I suppose that puts me out of the average man's class. Dick here isn't much interested, but since he usually goes where I do, that's sufficient reason for his being here."

"I see," Johnson said, though he did not look as though he did. "Er—a theory?"

"I think you might be interested, Doctor. It concerns the break-up of the moon and disappearance of Mercury."

"You are a flyer, Mr. Hurst. I cannot possibly see how you can have worked out a theory for a matter purely astronomical. In any case I have all the necessary scientific reports."

"All except the right one, possibly."

Dr. Johnson looked annoyed for a moment. "Now just a moment, young man. I wouldn't dream of trying to tell you how to fly a 'plane, so——"

"I did not mean any disrespect, Doctor, and I apologise. Science is my hobby, and as an airman I see a good deal from up in the sky. I've worked out an idea, as you see from these notes I have. It seems to me that there might be some sort of connection between the way things go red before they disintegrate, and the actual disintegration itself."

"Connection?" Johnson was looking puzzled. "But—in what way exactly?"

Frank moved across to the nearby table and spread out his notes and drawings. Looking vaguely interested Dr. Johnson watched him.

"Mercury," Frank stated, "went red before it broke up; and the moon did the same thing. In fact the moon went the same colour as Mars has been for generations—ever since astronomical records began to be kept. Right?"

"Quite right." Dr. Johnson gave a sharp look. "But what are you getting at, Mr. Hurst? You seem very much in earnest about something but you take a long time to come to it."

"I have to go the long way round," Frank explained. "To cut it shorter, however, did it ever occur to you that the colouring we see—the redness—might be caused by dissipation of energy?"

"Energy?"

"I know it sounds queer," Frank admitted.

"It definitely does. What on earth has energy got to do with it?"

"According to my reckoning, quite a lot. Energy gives off a radiation of sorts—as almost anybody knows. Look, I'll try and give you an example. We know that as a metal increases its heat, as the atoms dance more furiously, the colour changes—starting with white, then becoming violet, and so on. . . . Now, isn't it just possible that an internal change might occur in a planet which for some reason causes the planet to change colour?"

Johnson was commencing to lose his impatient look.

"Explain more fully. I'll admit I'm interested, even if

it is only because your theory gets off the beaten track."

"I work it out like this——" Frank turned to his notes. "Worlds are composed of various sorts of metals, basically iron, but there are lots of other metals of which we know next to nothing. We do know that some metals undergo mutations—radium, for instance, which finally turns into lead. As the change takes place radiation is given off and there is also a definite colour play——"

"Yes, yes—go on."

"Suppose," Frank said deliberately, tapping his notes, "that *worlds* mutate?"

There was a silence. Dr. Johnson moved restlessly, by this time completely absorbed by the theory which had been put forth.

"It's fantastic!" he exclaimed.

"I know it is, Doctor—but then, so are lots of things. I repeat: if most things mutate, why not planets?"

"You mean, I take it, that the very basic elements of the planets mutate into something quite different?"

"That's the way it looks. During the mutation period they glow orange red, which is the energy of change being emanated, a common enough phenomenon to understand. When you come to think of it, man has mutated from the amoeba through various changes. Radium mutates into lead: a corpse mutates into new basic chemical elements, so why shouldn't a planet, which is a complete body in itself, arrive at a change in its evolutive cycle wherein its basic elements undergo a complete re-shuffle? Maybe cosmic rays have something to do with it. They generally get the blame for causing evolution."

"Extraordinary," Johnson breathed, pondering. "And yet it makes you think——"

"It's *possible*!" Frank insisted. "Mars has been red for centuries, which we have taken to mean ferrous oxide deposit. It could be something much more significant in the scale of evolution. Mars has lines on it which were thought at first to be straight but which are now known to be anything but. They *could* represent the cracks which will

finally smash Mars in pieces. The moon, being smaller than Mars, broke more rapidly. Mercury, torn by the vast gravity-field of the sun, broke before any of them. Jupiter being so colossal will take a long time, but the signs are beginning in the Great Red Spot. The other worlds are so thickly clouded that we have no indication of what goes on beneath."

"True, true," Johnson admitted.

"I'm pretty sure I've got something," Frank continued. "When the change comes metals form into new structure—new elements even—and the old basic formations dissolve. The result is colossal chasms and gradual break-up of the planet concerned. Mars will probably smash when the colour change is complete."

Johnson gave a rueful smile. "I have to confess that it is an angle which had escaped me, and it's well worth investigating. So far the catastrophies have us baffled. You have started an entirely new train of thought."

"That was precisely my intention," Frank answered. "And there is something else yet. Earth itself is glowing with coppery light in parts. Vast areas are visible that colour at night. Dick here has seen them too."

"Miles and miles of orange light," Dick confirmed.

The frown on Dr. Johnson's face deepened. "But—you don't mean to tell me that you think *Earth* is also suffering from the same trouble?"

"I don't know." Frank's face was grim. "But I will say this: from another planet it would certainly look as though orange patches are spreading over our world. Must be the energy change of basic materials once again. Not enough energy is given off to injure people, obviously, or maybe it is of a quality harmless to living things—but it's *there*. The place to see it from is above . . . Next thing we know the change will be half complete and we'll have chasms all over the place like those of Mars. Being so much nearer to the sun our world is likely to break more quickly because of the gravity field."

Johnson was pacing up and down like a hungry panther.

"Your theory comes as a particular shock to me because it seems so very, very right," he said. "I myself, and several other scientists, recently arrived at a similar conclusion—but we didn't publicise the fact because it is all so—so incredible. Now that you, a layman, have *also* made the discovery unaided, it bears us out."

"I'm probably only one of hundreds who has reasoned it out like this," Frank responded. "I'd publish your results if I were you, otherwise the public is going to ask what the scientists are doing."

"True, true. There is one way to check up on the mutational theory, and that is to have skilled metallurgists and physicists examine the lunar meteorites which fell to Earth recently. From them it may be possible to deduce the cause of the break-up. In conjunction with the air authorities, we may be able to determine how and where these orange areas begin."

"Seems about the best course," Frank agreed.

"I wonder," Johnson continued, "if you would be interested in another peculiar angle on this lunar collapse? You might like to know about it before the newspapers and radio publicise it. In the ordinary way I would not have dreamed of showing you this, but since you have a more than normal interest you are entitled to a—a 'preview'."

Johnson turned away and Frank gave Dick a wondering glance. They followed the scientist to the point where he had stopped beside the switchboard which controlled the telescopic equipment.

Johnson moved the controls so that the X-ray sighters penetrated the daylight clouds which had gathered in the late morning sky. On the atomercury mirror appeared an extraordinary scene surrounded by the incomprehensible blackness of outer space. It looked like a massive metal globe, on the style of a deep-sea bathysphere, catching the light of the sun. From the steady turning of the telescopic mounting the object was clearly travelling space at a fair speed.

"What the blazes is it?" Frank demanded at length, baffled.

"Earth's new satellite," Johnson replied quietly. "As far as any of us can see it must have been buried in the core of the moon, and when the moon fell to bits this object was released. Some form of scientific planning prevents it falling inwards to Earth. Instead it whirls round our world at a speed about twice that of the former moon and at a distance of two hundred thousand miles. Though it looks a small thing amidst such vast surrounds it is actually some fifty miles in diameter! A most singular mystery! Nor are we likely to know what it really is until space travel is mastered. By to-night the whole world will know of this. You are simply in possession of advance information."

Frank rubbed his chin slowly, a wistful look on his face.

"To just look at it, Doctor, is too much for me. I'd like it a whole lot better if I could land on it! Still, I suppose that's out of the question. Thanks for showing us, all the same. Maybe I'll find an explanation for that, too," he finished, grinning.

"If you can, I assure you I shall be one of the first to listen," Johnson responded.

Upon that observation Frank and Dick departed. That evening the theory which Frank had worked out—in common with the professional scientists apparently—hit the telecasts and newspapers in screaming headlines. And an already harassed public began to wonder what was coming next. To everybody the news presented one inescapable fact—— The end of the world was a grim possibility.

The end of the world . . .

CHAPTER TWO

Resuming their transatlantic mail service within a few days, Frank and Dick were witnesses of the gradual change overtaking the world. In their driving cabin they looked down upon the night-shrouded Atlantic Ocean, and found it shot through with sombrely glowing red.

"Looks to me like a volcanic crater," Dick said seriously; then he studied the land they were approaching through the darkness. "And the land's the same too! Coppery sort of fog. Stars same shade as well."

It was unusual to find Dick serious, but he certainly was now.

"If you ask me," Frank said, commencing to lower the 'plane from the higher altitudes, "it won't be long now! After all, Johnson had the scientists inspect those lunar meteorites and they proved energy change is the cause. That means plenty of danger for us."

"Seems to me there's danger enough as it is," Dick muttered. "As one small instance take the tides. They've gone completely haywire since the lunar break-up."

"A detail to what is coming, I'm afraid."

How right Frank's prophecy was became evident after a few more days had passed. Three nights later, when once again they were "on the hop", they received news over their teleradio of an American earthquake. To their startled

eyes the baby screen mirrored a picture of a fissure which extended from Wisconsin to Texas. The announcer's commentary explained the flashing views.

"The force of this earthquake has been felt the length and breadth of the continent and far out to sea. The waters of the Gulf of Mexico have rolled through Arkansas, Missouri, and Iowa and emptied into Lake Superior. A tidal wave has inundated Ontario. St. Louis and Milwaukee are flattened to the ground——"

"Take a look at that," Dick gasped, as the teleplate showed the cities concerned pointing gaunt, flame-licked spires to the sky. In the streets below were the black tides of fleeing people. Exactly where the television cameramen were to get such scenes was anybody's guess.

"Stand by for world hook-up," the announcer said suddenly, and as the view changed to a volcanic crater he continued, "Furious activity on the part of Vesuvius, Etna, Stromboli, and other famous volcanoes is announced. The world seems to be undermined with fire——Take shelter!"

Dick cut off the radio and sat with a grim face staring into the darkness outside; then he glanced at Frank. He, too, was looking outside, searching for the London lights.

"Begins to look as though you guessed right all along the line, Frank."

"Of course I did——" Then the airport radio cut off Frank's sentence.

"Calling all aircraft! London airplanes of all types will return to base immediately! Evacuation orders. That is all."

"It's enough," Frank growled; then catching sight of the lights at last he set his instruments and drove the machine down in a long curve, landing with his usual smooth precision.

In the airport briefing room he and Dick found a certain unusual air of confusion. Pilots were milling around awaiting or following out orders and a hubbub of conversation filled the air. Frank elbowed his way through the midst of the men until he had reached the C.O.'s desk, moved to a

corner of the building which was in the midst of reconstruction.

"Anything wrong, sir, bar earthquakes?" Frank enquired, and at that the C.O. looked up quickly from his schedules and time-tables.

"Yes, I'm afraid there is." The C.O. looked at Frank, then Dick, and finally beyond them to the men who had gathered around; then he went on, "President Andos has declared a state of emergency and the population of the British Isles is under martial law. Chiefly, I gather, to stop panic and looting. Emergency scientific committees have been formed to discover the safest place to which evacuees can go—if there *are* any safe places. According to the geologists the mountain regions seem to be the most suitable." The C.O. paused, then his next words explained the bitter smile which had come to his features. "We all know why martial law has been proclaimed. Joseph Blair, the revolutionary, has an excellent opportunity at the moment to overthrow President Andos. So Andos, not taking any chances, has nailed every possible source of unrest—or believes he has. Personally I think Joseph Blair is capable of anything."

"From the way they behave," Frank commented, "one would think that the leaders imagine this series of disasters to be only temporary. Either they cannot—or will not—realise that the whole world is likely to follow the example of Mercury and the moon and crack up before long!—Anyhow, that's in the future. What are my orders, sir?"

"There are none for any of you at the moment. Just stand by and wait for it. We'll get some action out of headquarters before long!"

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The moment the orders arrived Frank and Dick found themselves in constant demand for evacuation work. During lulls in the upheavals, which seemed to show but little sign

of settling down, they flew as many people as possible from the danger areas to the comparative safety of the mountain regions, both in the British Isles and abroad.

It was hazardous, dangerous work in the teeth of screaming tempests and appalling flying conditions. Each trip seemed to be worse than its predecessor.

On their fifth journey, carrying an assortment of people from the threatened regions of the cities to the Lake District, they met with disaster. It was when they were droning over the South Midlands that there suddenly blasted from the quieted heavens a storm of stupendous violence.

Immediately Frank found himself struggling desperately with the plane. Below, deserted landscape, ploughed and riven into seams by earth-shock, loomed out of the pelting rain. Nose-first, the plane crashed into the midst of mud, crops, dismembered trees and former pastures. It tilted and became still. Suddenly there was a flash of flame from the motors.

"Outside, everybody!" Frank cried hoarsely, slamming open the door to the sparsely filled passenger saloon. "Out! Everybody for himself!"

He and Dick blundered out of the control cabin to lend assistance. They caught the first man they encountered and whirled him to safety, then they turned back for the others. But they had hardly moved three steps before they were flung flat on their faces by a terrific concussion. The plane motors had exploded. In an instant the whole machine was a flaming mass of wreckage, its remaining passengers trapped inside.

Frank staggered to his feet and stood staring at the crackling inferno in which some half-dozen men and women had died. As chance had it the storm was ceasing now. The rain, which might have helped extinguish the blaze, was little more than a mist. Overhead the sun was struggling through again. Only the twisted landscape was left to reveal the force of this recent earth-spasm. . . .

In five minutes ashes marked the funeral pyre. Frank

passed a hand over his forehead and then glanced at Dick. His gaze moved from him to the young, good-looking man who had been dragged out just in time.

"Well, that seems to be the end of that," Frank sighed. "One gets sort of used to death and disaster these days. It's no longer the shock it used to be. Glad we managed to get you out, anyway, my friend."

"Yes, I've plenty to thank you for," the solitary survivor responded soberly. "My name's Bart Nasmith," he added.

Frank nodded. Then after a silence Dick said briefly: "I suppose all we can do now is foot-slog. Pretty rotten job, too, through all this mud and stuff, but we can't stand still. London isn't so very far off—what's left of it. We might make it by nightfall——"

"Say, wait a minute!"

Frank's voice had a note of wondering surprise. He was looking at the nearest trough in the earth, a trough six feet deep in an irregular line—but that was not all he was looking at. Something was *in* the trough—a hulk of metal with a dull glitter catching the sunlight. It looked remarkably similar to the prow of a submarine.

"What the devil is it?" Bart Nasmith asked, catching sight of it.

Frank gave a shrug and led the way forward to the mass. It appeared to be a gigantic metal egg, somewhat like a mine, with its lower end buried in the ground. Evidently it was not solid all through, for on the outside were bolts and locks, complicated enough, but not entirely incapable of being released.

"Well, it's certainly not a meteorite, which was my first guess," Frank said presently, mystified. "It looks like one of those land moles they used during the war—only I never saw a land mole with locks on it!"

Finally, as neither Dick nor Nasmith seemed to have any suggestions to make, Frank turned to the locks and began to struggle with them. With Dick's aid it took the best part of an hour to move the screws—then the work ended abruptly as the coned lid shot upwards under the actuation

of an internal spring, leaving the interior open for examination.

Fishing his torch from his belt, Frank climbed over the rim and lowered himself inside. The bright torch beam and reflected sunlight made things more or less visible. He began to scramble down a metal ladder with Dick and Nasmith following him to the thing's interior. It was perhaps twenty feet across, and to the opened roof the height was about twelve feet. Certainly the thing was neither a submarine nor a war land-mole. It was— But here loomed an interrogation mark. None of the men knew what it was. Frank's inner belief that the object might be a spaceship was discounted by the absence of anything suggesting motive power.

Altogether the interior looked like the control room of a high-powered aircraft. The instruments were peculiar and had no recognisable trade names stamped upon them. There were also projectors with banks of strange lenses, and inside these objects was concealed machinery which whirred at intervals and then stopped, entirely automatic. Dynamos buzzed, too, from obscure corners, intermittently, but the source of their power was a mystery.

"Any ideas?" Dick asked at length, scratching the back of his head in bewilderment.

"Well, I know one thing," Bart Nasmith answered, completing a long prow around and then rising from a study of the walls, "this cylinder is so arranged that it is contacting metal veins in the ground. If you look closely you'll see there are studs arranged all round this cylinder. On this side of the wall we only see the indents of them. The studs are bound to contact at least one vein somewhere. Notice how each stud is wired to a dynamo, so at least one of them must tap power?

"Mmmm—I believe you're right," Frank agreed, after surveying. "And where did all your knowledge come from?"

Nasmith smiled a little. "I'm a consulting electrical engineer, and I certainly know what I'm talking about."

"I gathered that. Then what do you think is the idea of these studs?"

Nasmith was silent for a while before he answered, weighing up the electrical and scientific implications; then at last he responded: "The Earth is spinning round rapidly and generates its own electricity—as most people with a scientific turn of mind already know. The electricity is transmitted to the surface through various mediums, but the swiftest route is undoubtedly through Earth's metallic veins, particularly those of copper. I think, when we came in here, that something happened. We started up a dynamo somewhere which was actuated by Earth's own electricity operating through metallic seams. Briefly, something happened! The machinery worked for a while, and now it has stopped again."

Nasmith broke off and frowned in thought. "The purpose and cause of all this will probably remain a mystery for all time."

"It all seems rather crazy to me," Frank said, glancing about him. "We don't know who put this darned thing here, or why. We don't know a thing about it——"

"Except that it has been made by brilliant scientists," Nasmith interrupted. "This notion of contacting Earth's metallic seams to provide power is a masterpiece. It suggests that——"

"Say, does this explain anything?"

Dick had emerged from another part of the cylinder and in one hand he was holding a roll of plans. He quickly flattened them out in the torchlight beam.

"Machinery!" Nasmith exclaimed. "And very remarkable machinery, too! I've seen a few complicated electrical circuits, and designed some, but I never saw the equal of this——" He paused, obviously amazed. Frank and Dick exchanged glances, insufficiently versed in higher electrics to notice anything unusual about the drawings.

"Where did you find them?" Frank asked Dick after a moment, and he jerked his head to a corner.

"In the cupboard there. Seemed to me they might have a special value."

"I'd say there's no doubt of it," Nasmith commented.

For a long time he studied the designs. There were three plans altogether, the sum total forming a mass of electrical technique which obviously baffled him. Machines of completely unorthodox design were described and drawn in detail. At length he gave a sigh and shook his head.

"Can't make head or tail of this lot, fellows," he confessed. "Just the same we'd better hang onto them in case they fit somewhere later on. Better take them along to London with us and see what the authorities think. Nothing more we can do here."

CHAPTER THREE

It was one thing for the trio to decide to return to London with their information but decidedly another thing to do it. Because the cities were considered unsafe the three men found themselves presently engulfed in a flood of human bings, vehicles, and every conceivable form of transport pouring out of London. Even the sky was thick with evacuation 'planes.

At the end of their laborious struggle "against the current" the three found themselves faced by two burly individuals at a road barrier, men with curious insignia on their uniforms. It was an even bigger surprise when they drew revolvers.

"State your business," the bigger man ordered.

Frank hesitated, affronted by the display of armed authority. Finally he made a curt response.

"I'm Frank Hurst of Transatlantic—First Pilot's Certificate. Here is my co-pilot, Richard Meredith—and a Mr. Nasmith, a civilian, consulting electrical engineer. Our 'plane got ditched."

"Where?"

"I haven't the vaguest idea. We were struck by a sudden storm. Possibly about fifteen miles outside the city."

"Let me see your papers. You know as well as I do that return to London for any purpose whatever is forbidden—unless there is special permission granted."

"Forbidden?" Frank repeated. "First I've heard of it— And I haven't any papers. They got burned up in the plane. I kept them in the usual rack beside the control board along with my manifests. You can radio the Transatlantic Executive and satisfy yourself."

The guard did not appear to be listening. He had caught sight of the roll of plans in Bart Nasmith's hand. Suddenly he snatched at the roll before Nasmith could stop him and began to uncurl it. With his fellow guard looking over his shoulder he studied the designs intently and then gave a grim smile.

"How do you explain these?" he demanded, looking up.

"Since those are my private property I don't think it's necessary to explain them," Nasmith retorted.

"No? Evidently you are not aware that you have no right to be carrying any papers except identity manifests when the country is under martial law."

"For heavens sake be reasonable," Frank interrupted, losing patience. "Do you think that if we were up to some kind of trickery we'd walk around with the plans? It doesn't even pretend to be logical. We have to see the authorities concerning these plans and——"

"You're not seeing anybody without a permit. The best thing you three can do is come with us for questioning—we'll check up on Transatlantic too. Get moving!"

There was nothing else for it; but as he walked Frank puzzled things out for himself. The militia and martial law at such a time was only to be expected; but what did confound him was the absence of any ordered evacuation system connected with London. Instead of a smooth control, there now seemed to be a pell-mell exodus from the metropolis, not altogether attributable to an impending earthquake either.

Frowning, he glanced up at the droning 'planes. Not all of them were evacuation machines: some were heavy bombers. A thought flashed through his mind, and he looked sharply at the guards' tunics.

"What's going on in London?" he demanded. "Any reason why I shouldn't know?"

"No reason at all," the biggest guard responded, and with a sourly triumphant smile he added: "At last we've got rid of President Andos."

Frank caught the troubled glances of Dick and Bart Nasmith. So that was it! Now the thing was explained. The cancellation of old orders and substitution of new ones stood revealed. The revolutionary movement, which had always been simmering against Luther Andos, had abruptly come to boiling point. Taking advantage of a cataclysm of Nature, the opposition powers had struck, wresting control from Andos, and now——

"You mean that Joseph Blair has taken over?" Dick asked, with his usual schoolboy innocence.

"Yes." The guard looked proud to confirm the fact. "It was not difficult with everything planned before hand. It only needed one opportunity—which the earthquake gave us—to overthrow Andos and stampede the already demoralised people. Control over military resources prevented what might have flared into a civil war."

Frank became silent, weighing up his chances against Joseph Blair. With Luther Andos it would have been a simple matter to establish his motives and identity: with the other man it would not only be difficult but perilous. And Dick and Bar Nasmith knew it too.

As they progressed Frank noticed that several part of industrial London were still hard at work. Labourers were swarming in the foundry yards. Giant furnace doors were opening at intervals. Not since the old style war rearmament had such an intense wave of industry been evident.

"Just what is Joseph Blair planning to do?" Frank asked, falling into step with the leading guard. "What's the idea of all this activity when the world might fall to bits at any moment? There must be tens of thousands of workers in this foundry region. They ought to be leaving for safer parts."

"That is up to Joseph Blair," the guard responded. "And

as to your first question, I cannot answer it. What President Blair intends to do is his own business, not that of those who serve him."

"I don't serve him nor do I acknowledge him. The only man to whom I owe allegiance is President Andos and—"

Frank was silenced by the vicious slap of a hand across his face. He stopped in his stride, his eyes mutinous, but the gun levelled at him made him slowly unclench his fists.

"You will learn," the guard said coldly, "to speak of Joseph Blair with respect. If you do not you will be made to! Now keep on moving.

His lips tight, Frank obeyed; the march leading now into the crumbled heart of the tumbled city. One of the undamaged buildings had been turned into a military headquarters, and into it the three were directed. Without being given the chance to defend themselves in any way charges were made out against them, and the next thing they knew was that they had been bundled into a prison cell.

"You will hear more later," was the guard's grim promise as he departed. "And I fancy you will also learn that it is not prudent to disavow Joseph Blair."

With that the massive metal door slammed, locked itself, and an electric circuit came into commission to make even tampering with the door a dangerous occupation. The sound of the guards feet upon the metal-floored passageway receded into silence.

"Apparently," Dick sighed, only just visible in the dim yellow light with which the cell was fitted, "we are in several kinds of a spot!"

"Spot is right," Bart Nasmith said bitterly. "If I know anything about Joseph Blair he'll have all three of us shot—especially me."

"Why should you have the honour so particularly?" Frank asked in surprise.

"Because I'm the son of the late Barry Nasmith, the politician who opposed Blair for several years."

"Makes it black for you," Dick agreed, "but if it comes to that the situation is pretty nearly as bleak for us. We

are both airmen and therefore sworn to obey the regime which Blair has overthrown. We cannot, as a point honour, follow the orders of anybody else but President Andos, unless he himself were to dissolve such an allegiance. Part of our oath."

"The main thing which is worrying me," Frank said, looking for and not finding some sign of a chair or bed on which to sit, "is those plans. We certainly shall not tell Blair where we found them—and because of our silence he'll be entitled to suspect anything he likes. If those plans happened to be of considerable scientific value there's no knowing what uses he might put them to. Remember, he is one of the ablest scientists of the day. As for space travel, he has the theory of it off at his finger-ends. I've read several of his articles and heard his speeches. The only thing that has balked him so far in that direction has been opposition in high places and his own lack of money. But now——"

Frank broke off with a little whistle and shook his head. Dick and Nasmith remained silent and, finding nowhere to perch themselves, they finally sat on the floor, tired after their long journey from outside London. Since there was no window or ventilator in the cell—except a series of tiny air-holes high in the electrified door—they had no means of discovering how things were proceeding in the outer world, but once during the afternoon they did hear ominous rumblings, and their cell quivered under the reverberation of a fairly distant earthquake.

The guard did not return, nor was any food or water brought to them. As far as eating was concerned, they were not particularly troubled, but the lack of water was becoming close to torture in the dry warmth of the badly ventilated space.

"Nice way to treat three civilised members of the community," Dick growled at length. "The marvel to me is they give us a light—unless they can't help it because it happens to be in the circuit. I've just been wondering what will happen if we're forgotten and left here to grow beards

and dig our way out with belt buckles or something, like the Abbe Faria in 'Monte Cristo'."

"I suppose, if the worst came to the worst, we could eat our belts," Nasmith reflected. "I've heard of men doing it."

Frank did not speak. The conversation was too nonsensical to be worth the effort of considering, and anyway he was too busy planning how he would stand up to Joseph Blair when the time came to face him.

Finally Nasmith, unable to endure the cramp of being seated on the floor, got on the move. - He wandered around in the dim light for a while, then came to a stop and peered up at something high in the wall.

"What is it, a spider?" Dick asked dryly, watching him.

"No; I can see three spots of light. There must be some kind of a ventilator after all leading to the outside. We might do worse than have a look through. Better than sitting around doing nothing."

Dick and Frank both scrambled to their feet and formed a ladder against the wall so that Nasmith, who was the lightest, could be raised to the level of the ventilator holes.

"How long can you hold it, fellows?" Nasmith asked, as his eyes came level with the holes.

"Long as you like," Frank answered. "What sort of a view is there?"

"Fairly good—but this isn't a genuine ventilator. The holes have glass on the outside which accounts for us not having any sounds floating through. Maybe this was a window or something at one time——"

Nasmith broke off, something taking his attention. He could see the foundries quite clearly, but his eyes were fixed on the vast open space in front of them. Something puzzling was happening there. In the evening light a wingless flying machine was climbing upwards with tremendous velocity. It went straight up at terrific speed to perhaps ten thousand feet; then something went wrong——

From the heights there was an outflaring of light and, some seconds later, the concussion of an explosion. Frank

and Dick both felt the impact even though they did not hear the noise which accompanied it—no more than Nasmith did.

"What the devil was that?" Dick demanded. "Felt like a bomb dropping— And you're getting heavy, brother."

"It seems incredible," Nasmith said slowly, jumping down, "but I believe I saw a projectile a moment ago. A space ship! It failed to make the climb and fell back again. That was the concussion you felt——"

"This," Frank said urgently, "I have got to see."

Using Dick and the engineer as his support he climbed upwards and peered outside—but he failed to see any further signs of a possible rocket-projectile. He saw something else, though, and the view fascinated him. In the evening sky, clear for once, a massive new satellite was travelling swiftly. It was the "Copper Globe," as the papers ingeniously called it.

"I'd give all I've got to know what that thing really is!" Frank muttered.

"What thing?" Dick wheezed. "And in case you don't know it I'm getting a bit tired of being your physical support. I had Bart here to support before you, remember— Let me have a look."

"Sure thing."

Frank jumped down and Dick took his turn, but where both Nasmith and Frank had seen something interesting Dick was not granted any such break. He returned to the floor looking a trifle disconsolate.

"What was the 'thing' you were referring to?" he asked Frank.

"The Copper Globe: I caught a glimpse of it. I only wish I had the chance to examine it!"

"As for that projectile I saw, why not?" Nasmith mused. "Blair has been talking for long enough about space travel being practical. Those foundries which are working at such high pressure must be manufacturing space machines—and the reason for that is that Blair is scientist enough to know that Earth is doomed anyway and is evidently planning to

get the people away. Not all of them, I don't suppose, but those he thinks are worth rescuing."

"I've another angle on it, Bart," Frank said. "Perhaps Blair wants to find out about that Copper Globe, too. In fact, almost *certainly* will. He's never struck me as being so concerned with his fellow men that he'd want to save them from disaster. It's that Globe he's after, I'll swear to it——"

Frank broke off abruptly as there was a sound at the cell door. Evidently the electricity had been cut off for the door opened and the big guard who had had so much to say earlier came into view. He jerked his thumb significantly and spoke only one word——

"Out!"

On this occasion the three did not hesitate: they were only too glad to escape their gloomy prison. The guard fell in behind them and thereafter they were marched through the many lighted corridors of the big edifice and finally into a great room where, not very long before, the respected Luther Andos had held sway. Now the place was lined with grim-faced men heavily armed, whilst at the central desk, with its array of instruments, there sat the figure of Joseph Blair.

Though seated, he had an obvious military erectness. His grey hair had left the temples and enhanced the sweep of his high scientific forehead. He was dressed in military uniform as chief of the army which was in control over the country—but his usurped badge of civil authority blazoned his breast along with the medals he had won in more orthodox campaigns. His face was gaunt, emphasised by the scratch of a mouth and sunken cheeks.

As the trio was brought forward to him he looked up quickly and pinned them with piercing blue eyes. "Your case has been investigated immediately because of its treasonable nature," he stated, "and we are satisfied that each one of you is guilty of plotting against the State."

"That's ridiculous!" Frank protested. "We only——"

"Silence! Even under the former regime it would have been treasonable at a time like this to be in possession of what is obviously a series of plans for secret machinery. Under *my* regime such an action is fatal. Nasmith, where did you obtain those plans?" Blair paused, and receiving no reply he snapped: "Obstinacy will not help."

"It is not a case of obstinacy," Bart Nasmith said. "We do not consider it our duty to explain anything since we are still in the service of the man to whom we took oath. We can only regard you as a usurper."

Blair sat back in his chair and regarded Nasmith thoughtfully.

"I rather expected this from you, Nasmith! I recall your father's opposition to me! As for you other men, you evidently see fit to add insolence to treason! The plans will remain with the State and all three of you will pay the penalty demanded!" Blair paused and then added: "You have until dawn to-morrow to reconsider. Otherwise the supreme sentence will be carried out. Take them away."

Frank hesitated, on the point of arguing the matter out. Then he thought better of it. As he and his two companions were led out into the corridor the permanently operating loud-speakers concealed in the walls burst forth into life with an announcement——

"European earthquakes continue. Ex-President Andos has been stripped of all authority and incarcerated in the recently evacuated penal settlement on the Isle of Wight. He will remain there during Joseph Blair's pleasure."

The announcement ceased and Frank exchanged a significant look with Dick and Nasmith. When they were back in their cell Frank put his thoughts into words.

"So they took Andos to the Isle of Wight, did they? Cleared out all the usual prison inmates and put him in instead. Exile! He can't get away, and if there is a big 'quake the Isle, like as not, will get the full force of it and maybe disappear under the English Channel — Hell! If only we could get some word to him."

"With all due respects to the President," Bart Nasmith said ruefully, "I am more concerned with trying to save my own neck. I've just been wondering about something. Suppose we do tell Blair where we found those plans? It might save our skins, and I don't see he can do much even if he does know. The plans will baffle him as much as they do us."

Frank gave a cynical smile in the dim light. "And do you think Blair would be content with just that? No! He'd try and force the secret of the plans from us. He'd misinterpret our ignorance for obstinacy and we'd probably die far more horribly than being shot. I cast my vote for silence. If we have got to die it may as well be as quickly as possible."

There was silence for a while, Frank mooching around and thinking, then he looked up towards the wall ventilator — or at least where the glass-covered holes were.

"Any objections to lifting me up?" he asked. "Might as well see if anything's going on."

Nasmith and Dick promptly lent assistance and Frank found himself heaved upwards. As before he discovered he was looking out towards the foundries, and now they were picked out in brilliant lights to mitigate the darkness. He was also in time to see a repetition of that earlier experiment — a bolt of light and sparks towards the heavens, ineffectual climbing, then—— Not an explosion this time but a swift return to earth.

"Silly devil," he growled.

"Huh?" Dick questioned, heaving up a little. "Who is?"

"Some fathead out here trying to fly. If he is using rocket jets in the way we use plane controls he ought to have flattened out——" Frank stopped, an idea suddenly striking him. He came down quickly to the floor.

"Suppose," he said urgently, "we make a deal with Blair? We know that he's mighty anxious to accomplish space travel. Dick and I are expert fliers, so maybe we could make something of it. Are you willing, Bart, as an engineer——?"

"More than — and I'm thinking chiefly of that Copper Globe. If we could only reach it there's no telling what we might find — and of course the only way to do that is to risk space travel. I have the intuition that somehow that globe may be connected with that cylinder we discovered."

"Possibly," Frank agreed. "All right then, that's settled. Now how do we attract attention to show we want to get out of here? We daren't touch the door——"

"Surely to heaven somebody will bring us food and water before long?" Dick complained. "I'm that dry I can hardly speak."

"Which will not be troubling Blair one fraction," Nasmith commented. "As far as attracting attention is concerned I don't think there's anything we can do but wait!"

And wait they did, through what seemed to be several hours — and nothing happened. Finally they fell asleep and were awakened again by the arrival of the usual guard. He surveyed them coldly as they staggered to their feet.

"Time's up," he announced. "Outside!"

"Don't we even get a drink?" Dick asked hoarsely, licking his parched lips.

"Traitors do not need drinks. *Move!*"

"Before we do," Frank said, "we want a further interview with Blair. We've a proposition to put to him."

"I am taking you to him now. You were given until dawn to reconsider and it is now sun-up. Joseph Blair wishes to know what you have decided."

So the return through the corridors was again made and it looked, when the trio entered the controlling office, as though Blair had not moved from his desk during the night. He was still there, very erect, and cleanly shaved.

"Well, Hurst?" he asked briefly. "You have had time to think. Have you decided to compromise?"

"At least I have a proposition to put forward," Frank answered.

"If granting it is beneficial to me I'll listen to it. Carry on."

"Before I do, may we be granted a drink? I find it hard to speak."

Blair motioned, and water was brought across from the carafe in the corner. Dick and Nasmith continued drinking as Frank took a sip from the cardboard container and then started to talk.

"From the cell ventilator we have noticed rocket-machines going up——"

"Well?"

"I got the idea — all of us did — that those machines might have something to do with space travel."

"Which was not particularly brilliant of you," Blair commented, sitting back in his chair. "It *has* — and you, the same as most people, know that I believe space travel is possible. The trouble is, I have pilots at work who are not used to the terrific acceleration demanded for space travel and they keep blacking out under it. Trying to climb into space is a very different thing from normal flying."

"That," Frank said quietly, "is the point I wish to make."

Joseph Blair raised an eyebrow, but did not say anything.

"I don't have to repeat that I am an aviator," Frank added. "So is Meredith here. And Nasmith is an electrical engineer with scientific capabilities, which is useful. I was wondering if——"

Blair shook his head slowly. "I am not a fool, Hurst. You were wondering if you could fly a rocket machine and escape, eh?"

"Not altogether, but since you are not a fool you surely wish to make use of all the men you can? Where would be the sense of killing two expert strato-fliers and an electrical engineer if you could turn them to account?"

Blair mused for a moment, and when he spoke again it was half to himself.

"I have always believed that space can be conquered, just as men believed it back in 1950 — only to find themselves

faced with tremendous obstacles. The cause of their lack of success was that they had no real urge to conquer space and the scientists and Dismal Jimmies were against them. Now, however, with Earth in deadly danger, the conquest of space becomes a matter of supreme necessity. I have hopes of establishing some sort of surviving remnant of Earth-people on Venus. That, of all the planets, seems the least likely to be affected by break-up trouble. But first I am trying to prove that space *can* be crossed."

"Hence the rocket machines?" Frank questioned.

"Exactly. Ten thousand miles into the void is enough to show that a sixty-million mile leap to Venus is also feasible. The rest is simply a matter of quickly building machines large enough."

"The only men who can find out what you want to know, Mr. Blair, are men like us — and you know it."

Blair swung out of his chair and got to his feet. It was plain from his movements that he was undecided. Going over to the window he stood gazing out of it, hands clenched behind his broad back.

"A test of this kind demands skilled high-altitude aviators," Frank insisted. "Those accustomed to the vagaries of stratosphere work and who know what reaction to expect. And you have the wrong idea about us planning to escape. It so happens that as aviators we are automatically interested in space travel. There is, of course, a condition."

"I expected it," Blair replied, without turning. "You should know by now that I never heed conditions."

"Not even when there is something you urgently want?"

Blair turned. "I am a man of reason," he said abruptly. "What is your condition, Pilot Hurst?"

"We'll try and find out all you want to know — but in return we want our liberty. It is worth it — to us and to you."

Blair had evidently guessed what was coming for he replied almost immediately. "Very well. It is a concession made only because desperation demands it, otherwise you

can be sure your proposition would never have been entertained. The experimental flight will enable you to clear your name of treason. A new machine has been tested — possibly the one you saw to-night — but it needs an aviator of your calibre to fly it. You will be instructed in the control of the machine, which you will not find difficult, and then will make whatever personal preparations you wish — under guard. Then you will make the attempt. If you return with satisfactory records the charge against you will be dropped."

Frank nodded promptly. Blair had his ruthless ambitions and was prepared to sacrifice everything to them — but his word was sacred. His career had given proof of that.

CHAPTER FOUR

At a given time, two weeks later — their training in the handling of the space machine completed, the trio were escorted to the testing field. Here there stood the experimental rocket-ship with which they had now become quite familiar.

It was definitely well constructed and embodied all the scientific devices evolved by scientists in the past. For his own part Frank was quite sure the machine could do all that was required of it.

He, Dick and Bart stepped from the midst of the army of mechanics and guards through the airlock into the roomy control cabin and then sealed the massive airlock cover. Going over to the switchboard Frank studied it for a while and then glanced over his shoulder with a reassuring grin.

"Are we ready?" he enquired.

"What I want to know is — do we eat now or afterwards?" Dick demanded. "We haven't been too well fed up to now and I've got the devil's own appetite."

"The meal comes afterwards," Frank decided, settling in the control chair. "For one thing the outward acceleration will play Hades with our stomachs and we certainly don't want them loaded: for another, these bright boys outside will be waiting for us to start something — so we'd better move. The machine isn't difficult to control, as we know by now, and we can use automatic means when we want to rest. The hardest part will be the strain of the

initial take-off. Make yourselves comfortable, for here is where mankind tries to leap from Mother Earth for the first time in history."

Dick and Bart moved to the pressure-racks screwed in the wall and settled full-length on the air-cushions. Frank eased himself further into the multiple springs of the control chair and then closed the switches which gave ignition to the firing tubes. Immediately the machine quivered in its cradle, then with a blasting roar it hurtled upwards, crushing all three men downwards with overwhelming force.

Bart Nasmith struggled frantically to draw breath and, failing, fainted dead away. Dick remained conscious much longer, his face purpling, his heavy body furiously flattened and his features dragged and curiously smeared by the frightful inertia load. Somehow he kept his senses and turned blurred eyes towards Frank.

He too was still conscious, as accustomed as Dick to the strains and stresses of flying at supernormal speed—whereas the unconscious Bart was not.

"Think — think we can make it?" Dick whispered.

"Try," Frank muttered, and slowly dragged the power lever to its final notch. After that he could do nothing but lie panting in his seat, thinking his heart would burst at any moment.

"The — the screens," Dick gulped. "Switch 'em on. Let's — see where — where we're going."

With a stupendous effort Frank moved a hand which felt like lead and snapped on the screen which gave a view of the world they had left. They saw Earth, apparently falling backwards — a monstrous, orange-tinted wilderness spottled with twinkling lights in the great crescent where the night remained. With the passing of the moments it slowly became remote and merged into a roseate haze.

With tremendous velocity the flyer hurtled to the upper atmosphere, went through the stratosphere and ionic layer, and so out into the depths of space. Frank stirred with the slow movement of endless tons weighing him down. Dick,

he noticed, had succumbed at last and was as dead out as Bart Nasmith.

As yet the climb to the deeps had only just begun and Frank knew that he himself could not hold out much longer, battling as he was with swimming sense. So he switched the robot control into commission and then let himself go as naturally as he might under anaesthetic. He was in darkness and at peace.

When he recovered again he found that his breathing was normal and that the invisible steel hoops had been removed from his chest. The machine had achieved a velocity constant enough to counteract the gravity of Earth and because of this the automatic control had operated and acceleration had ceased. Dick and Bart were stirring also, groaning a little to themselves as tortured muscles felt to be cracking. Through the rear port Earth was visible as a globe, cloud-wreathed, filling all the void.

"We did it," Dick whispered, sitting up with an effort and gazing fixedly. "We actually did it! Frank, do you realise what that means? We're the first men to fly into outer space and survive — And hell's bells, what a view!"

He got up from the bed, forgetting that the velocity being constant gravitation was virtually nil, embodied only in the mass of the machine itself. In consequence he shot upwards to the ceiling, turning a slow somersault. Gripping an upright stanchion he clawed himself down to the floor again.

"From here on that is going to be our difficulty," Frank said, cautiously sliding himself out of his seat. "We'll have to control every movement otherwise we're going to knock ourselves about abominably . . . Now — let's see what sort of a view we've got."

He clawed his way to the rear observation window and by degrees his two companions joined him. In silent awe they stared out through the dense glass onto the incomprehensible majesty of infinite space. The stars hung as brilliantly as diamonds on dull jet. Indeed the blackness of

space was darker even than jet: it was an utter, total black impossible to describe.

Dwarfing everything, blotting out the light of the stars, was the incredible sun, at which they could only glance once and then blink furiously. He was streaming prominences and seemed to bow outwards in a ball of liquid fire, projecting his stupendous corona for multimillions of miles into the void.

It was weird, incredible region into which the three men had come and for a moment it filled them with a sense of being god-like. Then they gradually drifted back to the realisation of the business on hand.

"Food first," Dick said. "And something to drink— Everything else can wait. Suppose," he broke off in alarm, "there *isn't* any food on this crate? You never asked Blair."

"There ought to be some—and clothes and ammunition and weapons," Frank responded. "Nobody would start out on a hazardous journey like this without everything being taken care of."

His assumption was correct, for in a locker at the tail of the vessel was everything needful in the way of food and drink, including sealed bottles of restorative. The meal took the three far longer than they had expected due to the vagaries of the slight gravity. The food floated away from them until they mastered how to swallow it — when the action of the gullet itself pushed it down the throat. The liquids, too, sailed about, sometimes in one congealed mass, at others broken into floating, plasmic lumps. But despite such distractions the meal was finally finished and, refreshed, the three turned to other things.

"You still mean to keep your word, I suppose, and return to Earth like a good little boy?" Dick asked. "Find out all we can and then let Blair pick our brains cleaner than a herring bone?"

"I gave my word and I'll keep it," Frank answered. "Besides, there just isn't anything else we *can* do. Blair

has complete control of Earth, remember, and wherever we tried to land he'd have tabs on us immediately. But we are not returning yet. Our object in all this is to have a look at that copper globe, and that's what we're going to do."

Getting to his feet Frank made his way carefully to the switchboard and then manoeuvred the vessel around by intermittent bursts of the firing tubes until the gigantic copper globe drifted into view some two thousand miles distant. He had hardly done so before the short-wave radio connected with Earth came into life.

"Calling trial rocket-ship manned by Pilot Hurst. No information from you yet. Is trip successful? You are out of sight of telescopic range from Earth. Come in please."

"Out of sight?" Frank repeated, grinning. "That's just as well!" He switched on the radio equipment and then replied: "Frank Hurst speaking. Journey into outer space successfully accomplished. Shall go further to make complete test. Over."

A pause as the wave hurtled to Earth and, evidently, as the operator sought fresh instructions; then his voice came again. "President Blair instructs you to return immediately. You have made the trip into space and proven it can be done and there your responsibility ends. Make full readings of conditions in the void — temperature, radiation of cosmic rays and so forth — and then return."

"Very well," Frank responded, and switched off. Then he added: "I don't think! One thing about it — Blair is helpless in this act unless he can find some men as tough as we are to fly into space after us."

"And even they will require a machine in which to do it," Nasmith pointed out. "This is the only one at the moment — for test purposes. We've an absolutely clear field."

Frank nodded and turned his attention again to the copper globe clearly visible through the outlook window.

"That is definitely the queerest looking contraption I ever saw," Dick commented, frowning. "And the more I look at it the more I admire the brains which made it and planned

it so that it is held by the exact gravitly pull necessary to keep it from dropping to Earth."

"Mars is presumably the counterbalancing factor," Bart Nasmith said. Then he frowned. "In which case one would expect this Globe to be somewhere on the half-way line between Earth and Mars, approximately twenty million miles distant from Earth. Instead it is even closer than the Moon used to be! No, that isn't the answer," he corrected himself. "This Copper Globe must have started off with a certain impetus when the Moon collapsed, which impetus keeps it circling by centrifugal force an exact distance away from Earth. Some extremely clever mathematical planning there."

Frank was silent for a while, keeping the ship moving so that it held the Globe constantly in view. Then he said:

"We'll have to work our way gradually closer to it and then keep pace with it so that we can perhaps make a decent landing upon it."

His idea was perfect in theory, but it was a far harder job to put it into practice. What he had hoped to do in a few minutes actually took him a full two hours of dodging, levelling out, and manoeuvring, catching up with the fast moving globe, losing it, then catching up again — but at last he brought the projectile down upon a vast, sun-drenched "metal asteroid". Being so small, in comparison to a full-sized planet, the horizon seemed absurdly near, cutting off sharp against a backdrop of icily glittering stars.

For a long time the three stood gazing through the observation window. Now they had actually landed on the inexplicable object they could see clearly that it was not all one solid piece but built in sections — gigantic curved plates grooved and socketed and welded into one another with supreme engineering genius.

"The more I study this," Bart said finally, "the more I keep thinking of a spacial mausoleum. Sort of coffin. I know it isn't a very cheerful idea, but I just can't help it."

"Thing to do," Frank said, "is to decide how we tackle this thing. We have *some* equipment in the machine here

but I doubt if any of it is suitable for driving a hole through this sort of metal. We might——"

"Say, take a look!" Dick cut in suddenly. "Am I seeing things or—— See that nearer square?"

Neither Frank nor Bart said anything. They watched intently through the big window. Under some internal influence a panel was moving back in the metal-work and presently it left a black aperture visible below. There was a long moment of expectancy in the belief that somebody or something would emerge from the cavity — but nothing happened.

"Would you call that an invitation to enter?" Bart asked at length, giving Frank a glance.

"Mebbe. Certainly we didn't come all this distance to funk it at the last moment—— Better take a risk and see what we can discover."

Frank got on the move and took three spacesuits of rubber and metal mesh from the nearby cupboard. After about five minutes he, Bart, and Dick were ready, their helmets screwed in position and weapons in the belts around their waists. Frank moved as clumsily as a diver on his weighted feet and unfastened the airlock. Immediately the internal pressure escaped with a piercing whistle which re-echoed in the helmet audiophones.

"Right?" Frank enquired, into the mike close by his mouth, and the helmeted heads of his comrades nodded.

"Adjust your boot weights," Frank instructed, otherwise we may have difficulty if we have to make a sudden dash for safety."

Stooping, he rearranged the lead slides on his boot soles to compensate for the slight attraction, then he stepped out on to the metal plain and began a cautious advance towards the distant hole, Bart and Dick trailing behind him, attached by a safety-line. Not that it was possible to "fall off" the gigantic globe into space, since it was the only existent attraction for thousands of miles, but at least the line might be useful if one or other got into difficulties.

When he reached the brink of the square hole Frank

paused and gazed below. There were signs of a metal ladder glinting in the blinding sunlight — a ladder which went straight down into darkness and the unknown.

"Well?" Frank asked at length, looking at the faces of his comrades behind their transparent vizors.

They did not answer immediately. They looked around them instead at the vast, almost terrifying deeps of space and faraway Earth. Then Dick got his thoughts into words and for once in his life his voice sounded nervous as it came through the audiophone.

"I've got the unhappy feeling, Frank, that if we once go down there we're sunk. There's something too inviting about this lot to be convincing—— You know — spider and the fly notion."

"I'm no more happy about the notion than you are," Frank replied, "but we *did* come to find out about this thing, and I think we should. How about you, Bart?"

"I'll risk it," he said at length.

Frank nodded and eased himself over the edge of the hole, feeling for the rungs with his heavy boots. Once he made contact he began to descend, using one hand. In the other he held his gun in readiness.

Since he was in outer space with none of the diffusion produced by an atmosphere he was in total darkness the moment he passed from the range of the sunlight. It satisfied him too that there was no air within this globe — not so far, anyway. Misgivings still assailing him he kept on descending.

After going down about fifty feet or so he found his boot thrusting against a spring trap below him and he guessed it was probably an air-control vent. He forced it back with his foot and still went down. Since the blackness was now total, without even the view of the starlit hole above, he switched on his torch and waved the beam into the void. Above him, their own torch beams swinging, came Bart and Dick, seeing the descent through to the end as much as he was.

It was when Frank passed through yet another vent that there came a change. The edge of the sprung cover scraped against his suit as he went down and then shot back into place again as he came below it. But now he was in the midst of brilliant light and nearly at the end of his descent. His feet hit metal floor at last and he climbed from the ladder to look about him.

He had come into a wilderness of machines, none of which had any meaning for him. He was still gazing when Dick and Bart arrived at his side. Carefully they tested the **external conditions with their instruments** and found the air-pressure normal, so they wasted no time in removing their helmets.

"Evidently the Globe isn't so dead as we thought," Bart commented. "But why isn't there somebody in sight?"

Frank shrugged, surveyed the wilderness and then cupped his hands around his mouth.

"Anybody home?" he roared, above the whining of the complex machinery.

Nothing happened—at least, not immediately. The three stood on the gangway between the enormous engines, gazing down its length. What all this equipment signified they had not the least idea. For the moment they were stunned by the thought that such scientific apparatus, obviously fashioned by intelligent beings, could even be here. As for its purpose, they were completely baffled.

"Can you make anything of this lot, Bart?" Frank asked at length. "As an electrical engineer it looks up your street."

Bart was frowning at the machinery, then he shook his head.

"Afraid it's beyond me. I can recognise dynamos and transformers, but after that I get stuck. There's a whole pile of stuff here which is far advanced beyond my knowledge."

"Look!" Dick exclaimed abruptly, gripping Frank's arm.

"Somebody coming!"

Frank and Bart saw immediately what he meant, and they stared blankly. Three figures had come into view at the other end of the gangway, strangely dressed and massively built, but in formation they were definitely Earthly. They looked indeed like the most Godlike men Earth had ever produced — creations, almost, of mythology.

"I'll be triple dawned," Dick whispered. "Did you ever see three such he-men in all your life?"

The centremost figure of all, blond-headed, magnificent of carriage, came to a halt and gazed upon the baffled three.

"I am Ixicon," he announced, his words extremely precise, as though he had learned them carefully. "And here are my compatriots, Zaldoz and Vilgo."

"Oh!" was all Frank could say, weakly.

"There is a scientific and logical explanation for our knowing your language," Ixicon continued. "English — and indeed any language — is simple enough to master when you hear it constantly over short waves from Earth. Come this way, my friends, and I will explain."

Satisfied that the magnificent three were apparently not bent on mischief, Frank and his comrades started to advance down the gangway, passing the machines on the way. Bart, experienced though he was in matters electric, was still baffled. The enormous internal space of the Copper Globe was filled with switchboards, huge magnetic devices, projectors, back of insulators, and drums wound around with bright wire. The place looked remarkably like the inside of a television set magnified a million fold. Most of the power seemed to be tapped from a massive central unit surrounded by transparent insulated walls.

Ixicon finally led the way to a small partitioned chamber off the main hall. There were a fairly normal table and stools. The walls and ceiling were designed in enormous celestial maps concerning themselves with Earth and the inner planets. Mercury was clearly represented, and so was another planet between it and Venus, a fact which caused Frank to frown quite a deal.

Ixicon nodded to his contemporaries and they departed to

continue with their own mysterious occupations; then he indicated the stools.

"Do be seated," he invited.

The trio slowly obeyed, wondering what was going to happen next. Ixicon considered for a moment and then continued:

"When your projectile landed on the surface of our floating laboratory it started up an alarm. We opened an inlet panel for you. You three, I believe, will be the three who awakened my comrades and I in the first instance."

"Did we?" Frank glanced at his companions and then said politely: "Do you mind if I say I haven't the vaguest idea what you are talking about, or what this place is? A floating laboratory, you say?"

"We call it that, yes."

"I see—I think! And how does it happen that you and your two friends are here, looking so much like Earthmen, but much more massive and majestic?"

"We are the prototypes, my friend, of Earthmen. However, that will be explained in its proper order. For the moment let me dwell again on the fact that you and your comrades are probably the men who found the Agitator. It was rooted into the ground in that part of the land known in recent centuries as the British Isles."

Frank gave a start. "You — you mean a kind of cylinder filled with machines and containing plans? A machine contacting the veins in the ground?"

"Just so . . . Before I go any further I wish you to know that we are not in any way hostile to you. We are your friends, chiefly because you are, in a sense, descended from us. My comrades and I are here for a purpose, and when that purpose has been achieved we shall die."

The calm fatalism was curiously disturbing, but Ixicon did not seem to be conscious of having said anything out of the ordinary.

"Consider *our* position!" Frank exclaimed at last. "We come here to find a most incredible mass of scientific appa-

tus and three men who look as though they stepped out of Greek mythology. On top of that they talk — or you do — perfect English. Then we learn that *we* awakened you! Just what are we supposed to think?"

"I realise how you must feel, my friend. I will explain over refreshment, which I am sure you must need."

The three nodded promptly and watched in silent amazement as the pressure of Ixicon's fingers on various buttons brought forth machines on wheels guided on radio waves, each machine bearing its complement of palatable foods and drinks. Under the beneficence of both, the apparent hazards of the situation seemed to recede, particularly so since Ixicon appeared to be so amiable about the whole business.

"You said you would explain," Dick commented, as the conversation seemed like drifting into the commonplace.

"Ah, yes. Well, when you found the Agitator you blocked an electric eye radiation which set machinery in motion and——"

"Just what I thought!" Bart interrupted. "*I knew* we set something going."

"Quite so. The machinery did certain things. To this laboratory in space it transmitted an electromagnetic beam which, actuating apparatus at this end, brought to a halt a state of suspended animation in which my comrades and I had lain for untold generations. We awakened, our purpose as fresh in our minds as upon the day when we had settled down for a sleep which — we knew then — must last for an unpredictable time."

"But—but what's the idea back of it?" Frank asked, and Ixicon mused for a moment. Then he himself asked a question.

"Have you in your records any trace of a tenth planet? Not beyond the furthest one in the system, but near to the sun?"

It was Frank's turn to start thinking. His eyes strayed to the celestial maps overhead. He frowned to himself — then at last snapped his fingers.

"Yes, we have! A mythical world, or supposed to be, called Vulcan. Existing near Mercury and discovered by Le Verrier, a French mathematician. He proved its position by mathematics, but no astronomer could ever verify his findings, so it was assumed he had made a mistake."

"He made no mistake," Ixicon replied gravely. "The world of Vulcan as you call it was *this laboratory*. It being so small compared to a normal planet it doubtless escaped telescopic observation, nor does its copper colour give it a high albedo with which to reflect sunlight."

"Vulcan was *this Globe*?" Frank repeated the words slowly, astonished. "But how—I mean, it isn't near the sun now. It's right where the moon used to be."

"Exactly. Were none of your astronomers aware that the side of the moon turned from Earth was actually a gigantic depression, sucked into that position by Earth's powerful gravity when the moon was more or less plasmic?"

"Such a theory has been mentioned, certainly, but never proven. From Earth we never saw the moon's other side."

"No—of course not." Ixicon thought this out and then continued. "In that depression rested our Laboratory — this Globe, as you call it, and it settled there untold ages ago because those who controlled it believed it was better to be only a scant two hundred and forty thousand miles from Earth than some seventy or eighty million."

Frank's bewilderment had only deepened, a fact obvious from his expression.

"The actual mind behind all this planning died ages ago," Ixicon continued, after a while. "At that time a race of super-scientists from outer space had been forced to evacuate their own world in the region of far off Sirius and were looking for another planet on which to settle life-cultures begotten of themselves by scientific processes. They selected the world you call Earth—which, incidentally, explains why only your world in the entire System contains intelligent life. None of the others do, and yours would not but for the cultures put there and allowed to mature."

"But this turns the theory of evolution inside out!" Bart Nasmith exclaimed. "We have always believed ourselves evolved from the amoeba and patterned by the environment of our planet. In the beginning some strange catalyst started life and——"

"No," Ixicon interposed quietly. "No, my friend. Life would never have begun on Earth had not my master, long since dead, put it there. Life in a crude form, yes. It was then, but—as planned—it grew more intelligent and finally took on a form like that of the creators, but less magnificent in outline. Now you know what I mean when I said my comrades and I are — in a sense — prototypes of you."

"And — after that?" Frank asked, hesitantly.

"We had set the cultures — or rather my master had — and our spacial laboratory had been removed to a point between the two inner planets of this system from where we intended to watch the development of the cultures. A mighty experiment, my friends! An effort to populate a world with life which, if successful, could lead to mighty things. It could mean our own race, without a world, might blossom anew. It was at this time that a malignant radiation in outer space struck down all but a few of the finest minds in our race. It was also about this time that it was discovered that the whole System would break up one day under mutational change — which is happening now. Mathematics showed that the nearest planet to the sun would go first, then the moon, then Earth itself. So rapid moves were made. When that time came the cultures now on Earth ought to be of an order of intelligence capable of saving itself if given the opportunity — and by so doing preserving life in the system for future development.

"The Laboratory was moved nearer to Earth — settling in the further side of the moon. To Earth was taken the Agitator, my ancestors deciding that if intelligent life *did* evolve it would one day find this apparatus and, by the very act of exploring it, bring to life much superior beings two

hundred and forty thousand miles away. My comrades and myself."

There was no egotism in Ixicon's statement: just a calm declaration of fact.

"My comrades and I were chosen to be the — shall I say ambassadors of our race. We were placed in suspended animation, to awaken only if ever the Agitator was found. And it has been. It was also planned that when the moon broke up the Laboratory would remain in a similar though nearer orbit to Earth. With our aid," Ixicon finished, "the disaster which threatens Earth — and in time the rest of the System — can be averted. In fact it *must* be averted for there is so much yet for Earthlings, created by us, to do. They must not be destroyed when at the very base of the ladder of scientific achievement."

"And you say this mutational trouble can be counter-acted?"

"Yes, but it requires a link between here and Earth to accomplish it. My ancestors left a legacy of scientific genius by which to save Earth. There you will need machines built to certain plans——"

"Were they in the Agitator?" Bart broke in, and the master-scientist nodded.

"Then we have them — or did," Frank said, rubbing his chin doubtfully. "They were taken from us by the present ruler of our country. He thinks we are traitors. We risked travelling into space in an effort to win back our freedom." And he briefly explained the circumstances.

"I see," Ixicon said slowly. "In that case you must get the plans back by force if you have to. You must overthrow this dictatorship. In fact do whatever you wish, but if you would save your planet you must get those plans! I cannot tell you what they contain since they were not duplicated. My instructions simply show how *our* end of the scheme works."

"It would be a help to even know that much," Frank said.

"The process — as far as it concerns us — is that we plan

to trap in bulk the radiations which flow from space and which are responsible for mutations. These same radiations cause evolution. In their normal flow, evolution progresses gradually, but if they are trapped and stored as potential and then released in quantity along a given electrical channel they can force evolution ahead of its normal speed.

"The same with mutations. When we have enough potential stored and release it it will be redistributed by the earth-machines. The effect will be to force the present crumbling mutational period into a new state which will persist for millions of years. There will, of course, be violent shifts and changes, but they will be instantaneous. There will not be a gradual crumbling change which will cause the planet to drop to pieces in the process. For a few violent earthquakes and topographical changes the element can — and will be — stabilised. But you cannot do it without those plans which have been stolen."

"For the life of me I don't see how we're going to do it," Dick said, rubbing his chin.

"No, you don't realise what we're up against," Frank muttered.

"Supposing," the master-scientist remarked, "you had the power to raise an army—— Are there many would support you in trying to overthrow this Joseph Blair?"

"Surely. Especially if they could be convinced that the safety of the whole planet relied on his being deposed. But that would demand pretty terrible weapons of warfare and Blair has complete control of the army, navy and air force. So — there it is!"

Ixicon pondered for a while before he spoke again.

"I mentioned that we had intended coming to Earth. The space machine is ready and upon it are the weapons we had intended using had we found it necessary to implement our wishes by force. You can have impressed on your brains a complete knowledge of how to handle the controls."

"Sorry, I don't like the idea." Frank shook his head firmly. "I'm against bloodshed. I'd sooner let the planet collapse. At least it is natural."

"Strange indeed how you lesser intelligent creatures always think in terms of shedding blood," Ixicon mused. Then: "Our weapons create a complete paralysis which renders the victim motionless for either a few minutes or a few months, whichever suits you. Then they recover, none the worse. But in the interval whilst they have been helpless you have gained the mastery. Surely *that* does not shock you?"

"That is something!" Dick exclaimed. "Clean, quick and really efficient."

"Then I take it you have no objections to using such a method?" Ixicon asked. "Good! Come with me, all three of you. A mind-impressor will convey all the knowledge you can need, within a few minutes!"

CHAPTER FIVE

Returning to the laboratory he led the way to a machine like an upright coffin, three-sided, its back taken up by a projector-like instrument. Frank stood in the position assigned to him and cold blue radiance flooded around his head. The master-scientist threaded steel tapes into the projector mechanism and then threw a switch.

"Electric impulse recordings," he explained. "They impress on the brain centres for a period of about twelve months, then gradually lose their efficiency. During that time the impressions build up ideas and knowledge into the cells."

Frank nodded, too astonished to say a great deal. Though he realised that a great deal of knowledge was purposefully being withheld from him, he was definitely conscious of a stirring change in his mentality.

With the passing moments he comprehended the intricacies of new and complicated machinery — that of a driving panel which used cosmic power for its motive force. Though he was not permitted to understand the nature of the force he certainly knew exactly how the ship's machinery used it. Also his mind was given a scheme of attack, a knowledge of space radio, and other useful details . . .

When he stepped from the influence of the apparatus he felt like a genius.

In turn Dick and Bart underwent the same treatment, emerging looking somewhat dazed by the conferred knowledge. The master-scientist smiled a little.

"Well, my friends? Knowledge is easier to absorb than one would think, is it not?"

"Wish we'd had a gadget like this in my schooldays," Dick responded ruefully. "It would have saved me an awful lot of caning on the rear."

Ixicon nodded towards the end of the laboratory and led the way to a small, compact hangar with a gigantic external valve. In the centre of the floor reposed the space machine itself, a miracle of advanced design by comparison with which Blair's rock-ship was no more than a clumsy kite.

"You understand clearly what you will do?" the master-scientist asked, and Frank gave a prompt nod.

"As soon as we get to Earth and finish the scheme of attack we make machines and then establish radio contact with you."

"Correct. And understand this — If for any reason you run into disaster there is little we can do to help you without some delay for this is the only space machine, and to make another would take some time. Everything from here on is entirely up to you."

"We'll make it," Frank said confidently, and stepped through the machine's open airlock.

Feeling rather like one mesmerised he sat down at the controls, and Dick and Bart slid into the seats on either side of him. Ixicon retired from the laboratory-hangar, but a moment afterwards a giant valve opened to the starry sky.

"Ready, boys?" Frank questioned.

"Ready — yes — ready," Dick murmured.

Frank closed the switches. With a birdlike ease the monster swept through the valve-opening and into the void — but this time there was no crushing acceleration. Utilising the forces of the cosmos itself, drawn by fields of magnetism, the machine built up its power gradually and hurtled towards the black-lined Earth two hundred thousand miles away . . .

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The astronomers working under Joseph Blair's control — and therefore kept relentlessly on duty to keep a check on the heavens in an effort to foretell whatever disaster might be coming — picked up the silvery object between Earth and

the Copper Globe whilst they were engaged on routine survey. Amongst the astronomers was Dr. Johnson, and the more he studied the curious glittering speck and computed its speed the more puzzled he became. Finally he turned to his assistant, busy making notes at the spot-lit desk nearby.

"Take a look at this," Johnson said, moving from the atomercury mirror. "I thought at first it was Frank Hurst's experimental rocket-projectile on its way back, but from the look of it it can't be. Far swifter, and a different shape, too. Seems to me that it's come from that Copper Globe."

"Certainly unlike anything we've seen before," the assistant confirmed, frowning as he studied the minute image amidst the stars. "Only thing we can do is inform Blair. If we don't and the other astronomers pick up this object we're liable to get our heads blown off."

Johnson nodded and raised the radio-telephone. He gave the receiving operator instructions, and at length, by devious hook-ups found himself talking to Blair in person, his tiny facial image appearing in the scanning plate.

"Unknown space projectile?" Blair repeated, as he received the details. "And from the Copper Globe? Something decidedly strange about the situation, particularly as Pilot Hurst and his colleagues have not yet returned despite their orders. Very well, Dr. Johnson, thank you."

In his own controlling office Blair switched off and then sat thinking for a moment or two. He looked at his notes whereon were the details of the projectile's distance and its general appearance. Then, making up his mind, he switched on the main amplifiers which contacted him with all the important parts of the city.

"Joseph Blair speaking! I am particularly addressing all men of the air force. You will depart immediately to deal with a projectile which is heading towards Earth. There is nothing to indicate that the men within it are those who set off on a test flight, and the machine itself is completely different from the one which departed from here. At all costs you must prevent it taking any possible hostile action

against us. Do not destroy it unless absolutely necessary as it will stand examination."

Blair switched off and then hurried from his administrative office to other regions of the Executive Building. He finished his journey in the great power rooms which still gave life — and protection — to a city badly shattered by earthquake. The chief engineer, catching sight of Blair's signalling, came forward down the main aisle.

"Yes, sir?" he enquired. His tone was respectful because it had to be. He had come to realise that there was nothing to be gained by defying the present ruler's edicts.

"This building has high-power disintegrator projectors on its roof," Blair stated, "as defence against air attack. In the present circumstances can you generate enough power to supply those projectors?"

"I think so, sir. Some of the main feeder lines have been broken by the earthquake, but I can divert power from other sources — Might I ask the reason?"

"I believe we are about to be attacked," Blair answered briefly. "I will assign the necessary men to the projectors — all you have to do is supply the power when I give the word. We'll blast this invader out of the sky."

The engineer looked puzzled. "Only *one* invader? But surely we do not need such terrific power to——"

"I think we do. To the best of my knowledge the invader has come from the Copper Globe, and that object alone points to surpassing skill in science. All right, that is all. You have your orders."

Blair departed again, this time to summon the necessary men to handle the projectors. If there *was* to be a fight to retain the control he had established over the Earth he meant to win it — and, out in space, Frank, Dick and Bart Nasmith were looking down on Earth it was spread in its entirety below them.

Following out the plan impressed in his mind, realising that he was somehow working under semi-hypnosis, Frank directed the machine towards the British Isles. Once he had

his bearings he turned in the direction of London, halting the Flyer when he was about six miles above the half-shattered metropolis. Through the telescopic floor plates there was a view of the streets, the jammed lines of vehicles handling the evacuation from the city, and the busy ants of human beings.

Dick looked up expectantly, an inner sense telling him what came next in the plan. "Inform the people?" he questioned.

Frank nodded and moved across to the radio equipment. He closed the power switches, made an adjustment to the transmitter wavelength, then waited until he had enough power built up to send for a radio beam sufficient to swamp all other forms of transmission.

When at last the needles on the meters showed maximum he switched on the microphone and spoke, his tone unnaturally clipped as he responded to mental stimulus.

"People of Britain! Thousands of you are at your radios. Those who hear this message should pass it on to those who do not. Understand this and take heed! Joseph Blair must be overthrown! Not because of the system for which he stands, not because of the man himself, but because it is necessary for us to have universal co-operation throughout the world — and that can only come by the re-establishment of President Andos at our head. The President, at the moment, is a prisoner on the Isle of Wight, all other prisoners having been removed so they cannot possibly render him any assistance.

"Listen carefully! Joseph Blair is withholding certain plans which can make not only Britain but the whole Earth safe from the total collapse now threatening it. If Joseph Blair hands over those plans to President Andos, all well and good—but if he does not he must take the consequences along with those who support him. Either, then, Blair voluntarily releases Andos and reinstates him, and hands the plans to him within three hours, or we will do it *for* him! And whatever forces he calls upon to vanquish us will be

useless. We can — and shall — overcome this world cataclysm. Remember, three hours! That will be at exactly twelve noon."

Frank switched off and glanced over his shoulder to find Dick and Bart nodding approval.

"That ought to do it," Bart said. "All we can do now is cruise around until we see what happens. Keep the receiver on and we'll see if Blair has anything to say. I shall be extremely surprised if he hasn't."

Blair, at that moment, was in his controlling office and, of course, in common with everybody else, he had heard the message which had blasted across all other forms of radio communication. When the transmission stopped he looked across at his second-in-command on the other side of the desk. For the moment the plans they had been discussing were forgotten.

"That," said the second-in-command, puzzled, "sounded like Pilot Hurst's voice. Yet it was somehow different."

"And I think I know why," Blair responded slowly. "He is speaking under compulsion. Possibly, all unknown to himself, he has become an emissary for a dangerous power. He is being used by them and maybe is not conscious of what he is doing or saying. A very old military strategy, that! to send somebody else into the battle to do the work for you."

"You mean the 'dangerous power' is located in that Copper Globe and that Hurst is opening the preliminaries for them?"

"What else am I to think? He returns to Earth in a machine which is infinitely advanced on the one in which he departed, and I am quite sure he would never broadcast such an ultimatum of his own accord."

"And if he has the power to back it up?"

Blair gave a contemptuous glance. "One machine, man, against the weapons we have ranged in and around London here? One machine against all our warplanes and not inconsiderable numbers of pilots? No, it is just a bluff — and

we'll deal with it. I have already made the preparations: all that is needed is my final word."

He reached to the switchboard and contacted the radio-detection room. The voice of the head technician came through.

"Yes, Mr. Blair?"

"You heard that radio ultimatum a little while ago? Where was its location?"

"I'm afraid I don't know, sir."

Blair frowned. "What the devil are you talking about? Your detectors are constantly tuned to automatically give the distance and frequency of any radio transmission and you should have picked up this one . . ."

"We *should* have, sir, but we didn't. The moment it came on all our meters sank to zero. Every other transmission was wiped out and this master one did not register at all."

Blair snapped off the communication abruptly and closed another switch instead. The face of Dr. Johnson came on the screen.

"Doctor, I need your help," Blair said curtly. "You heard that recent ultimatum over the radio?"

"I did," Johnson conceded dryly.

"I have been endeavouring to trace its source — so far without success. The radio detectors failed to discover where the beam came from—— The only chance now is for you to try and detect where this projectile is. You can view the sky by daylight as easily as by night with those X-ray penetrators . . . See what you can find and report to me. It's urgent. I must know where Frank Hurst is situated."

"Very well," Johnson replied coldly, and switched off; then he turned to the assistant astronomer.

"I saw it was Blair, sir, by the teleplate," the assistant said. "What does he want?"

"He believes, I think, that we will give him the whereabouts of Frank Hurst so that he can make an effort to destroy him. No man was ever more mistaken."

The assistant hesitated for a moment then he went to the

control board and switched on the massive reflector. Automatically steel shutters closed over the windows and the atomercury mirror came to life. It was not long before the relentlessly probing X-ray beam had penetrated clouds and morning fog belts and picked up the image of the solitary projectile in the depths of space.

"Approximately two hundred miles from the surface of Earth," Johnson commented. "If he stays there he'll be safe enough for no airplane can reach that high, and as far as I know Blair has no other space machines ready for an attack."

"And you don't intend to give Blair the information he asks for?"

"Why should I? My only interest in life is seeing him thrown out of power. Most certainly I won't do anything to help him destroy our one chance of liberty."

"But if he finds out we're holding the information back——"

"I'm taking my chance on that." Johnson's face was adamant. "I cannot dictate to you what you must do, but you have my reaction."

The assistant looked again at the mirror, his face troubled, then with a sigh he turned back to the control board and restored normal light as the reflector died out. Perhaps half-an-hour passed without incident, then suddenly the main door of the observatory flew open and Joseph Blair himself entered, his chief guard coming up in the rear.

"Dr. Johnson, are you under the impression that I give orders for the pleasure of hearing myself speak?" Blair demanded, glaring at the astronomer as he sorted out stellar plates from the rack.

Johnson did not flinch when he turned. He was no longer a young man and perfectly schooled in the mastery of his emotions.

"I regret, Mr. Blair, that I am unable to oblige you," he replied calmly.

"What sort of an answer is that? I have an entire air

force waiting to deal with Frank Hurst and I cannot give it the departure order without knowing where the enemy is! You are the only man able to give the information, because no other telescopic reflector in the world has the same power as this one!"

"Even if I were to tell you Pilot Hurst's position — which I certainly do not intend to do—it would not avail you anything. He has taken care to put himself beyond the range of airplanes and you have no space machines."

"Who hasn't?" Blair barked, and though Johnson's expression did not change, that of the assistant astronomer did — and Blair was quick to notice it.

"So that's it!" he exclaimed. "You believe that because Hurst is beyond the atmosphere limit that he is safe from me? Not a bit of it! I have over two hundred experimental machines which can, under stress, venture into the void—— Enough of this evasion, Dr. Johnson! *Where is Hurst?*"

"I—I could show you, sir," the assistant astronomer said, hesitating, and he avoided the grim look which Johnson gave him.

Blair motioned. "Hurry it up. As for you, Dr. Johnson, I will attend to you afterwards. I am surprised that a man of your experience should even try to withhold information from the ruling faction."

"You are not the ruling faction, Blair," Johnson retorted. "You are no more than an interloper and a——"

Johnson did not proceed any further. He had one glimpse of Blair's hand motioning, then the guard's gun spat a vicious pencil of lavender light. Johnson crumpled, his face to the polished metal floor. The assistant astronomer, who had witnessed the performance, gave Blair a frightened glance.

"I trust," Blair said, "that you will not be such a fool as your ex-superior, my friend."

Having no particular wish to meet sudden death the assistant astronomer wasted no time in bringing darkness to the observatory and switching on the reflector. Blair studied the

image in the atomercury mirror and then glanced up sharply.

"How far away is that vessel?"

"Two hundred miles, sir — so Dr. Johnson said."

"I see." Blair made a note of the constellations against which the vessel was visible, then jerked his head to the guard. "Come — I have all the information I need."

At the door he paused as the assistant's troubled voice reached him.

"Mr. Blair, what do I do about—about——?"

"About Johnson's body?" Blair asked callously. "Inform the Central Mortuary and they will remove it. I will advise Dr. Johnson's relatives of his—er—unexpected demise from heart failure. As for you, I am still in need of an astronomer so from this moment you will take Dr. Johnson's place. And of course you will obey my orders instantly when I give them?"

"Yes—yes, sir. I will."

Blair smiled sourly and hurried out, the guard at his side. When he reached the main exit doorway, however, he paused for a moment, listening.

"You hear something?" he asked sharply — and the guard put his head on one side and listened. Finally he nodded.

"Sounds like a mob, sir, though I can't see anybody in sight at the moment."

Blair looked up and down the smashed street with its drunkenly leaning edifices. As the guard had said, nobody was in sight as yet, but from the sound in the still morning air many hundreds were on the move, and the noise was becoming gradually louder.

"Back to headquarters, quickly," Blair said, hurrying down the steps. "It's pretty plain what has happened. That infernal radio ultimatum has led the people to think that they can act on their own and try to overthrow me. It's time they were taught a lesson."

The guard nodded but did not say anything. For that matter he had little opportunity, running as fast as he could to keep up with Blair as he sped along the short stretch

separating him from the main Executive Building. He would not admit it but he breathed more freely when he reached its safety. Then, his face grim with anger, he hurried into his office and to the switchboard.

"Joseph Blair speaking," he announced into the microphone. "My orders are addressed to the militia and the air force. Both will immediately make the necessary moves to hold the populace in check. It appears that certain numbers of those evacuated from the city are returning, intent on mischief. They must be stopped and be completely disorganised. Use whatever force you deem necessary. Proceed immediately."

"Orders received," came an answering voice; and Blair then switched over to another wavelength.

"Joseph Blair speaking to Space-machine Underground Section Nine—— Transfer all machines to the surface immediately and summon the requisite testing space-pilots. Machines will depart as quickly as possible to a point located two hundred miles in outer space, the position being on the intersection of Lines Six and Eighteen on the Celestial Chart, in the region of Constellations X-TYM and Y-JLD. Answer."

"Message received. Proceeding."

"The space pilots concerned have instructions herewith to destroy the projectile at the point mentioned, but only if all other methods fail. I require both the projectile and its occupants undamaged and unhurt if possible. That is all. Let there be no delay."

Blair switched off when the messages had been repeated back to him. He was about to speak to the guard and then paused for a moment at the sudden distant concussion of a falling bomb. He smiled triumphantly.

"I fancy that will teach our unruly friends that I am still the master," he commented. "You, when the militia have broken up whatever insurgents there may be, will see to it that no more outbreaks occur."

"Yes, sir." The guard half turned to depart, having had

his orders; then he looked back again at Blair as he sat musing. "Er—there is a question I would like to ask, Mr. Blair."

"Proceed."

"I just cannot see what your ultimate objective is. By that I mean where is the point in pinning the people down and trying to institute new laws and form of government when Earth has not very much longer to exist? Where is the sense of being the master of a crumbled city, the lord of a land which is breaking up and doomed like the rest of the planets?"

"I assume you do not really mean to be impertinent," Blair said, with a cold glance, "so I will try and tell you what your dull brain has failed to grasp. In the first instance I took over control because I intended to remove a certain number of intellectuals through space to another world and there domicile ourselves: that I could not have done without deposing Luther Andos and getting all the necessary facilities to have space machines made. Hurst's successful leap into space showed that it *can* be done. I had selected Venus.

"Since then I have learned that it is not necessary to leave this world at all because, as Hurst's ultimatum showed, I have in my possession plans of machinery which will stop this Earth-disintegration. Obviously, then, I must keep control over the rabble in general so that they can be made to work on these machines when the time comes. I must also be the undisputed master. Apparently Hurst, or some mysterious power back of him, is trying to break my grip—and the people have been aroused. Both those distractions will be eliminated. Now, are you satisfied?"

"Yes, sir," the guard assented. "I hope I may be in a position to continue serving you when your regime is really instituted upon the stabilised Earth."

"You will serve me as long as I have a use for you and as long as you behave yourself. Now you can go. I have already given you your orders."

CHAPTER SIX

In the space-machine two hundred miles from Earth, Frank and his two companions divided their time between watching the chronometer and gazing out into the depths of space. So far two hours had passed since the ultimatum had been radioed and there was still no response.

"I suppose it was received all right?" Dick asked doubtfully. "After all, we *are* using a radio equipment which is totally different from anything we ever heard of before. Utilising cosmic streams is a mighty different notion to taking your juice from the power plant. Perhaps something went wrong?"

Frank shook his head. "Don't you believe it! I'll gamble that at this present moment Blair is racking his brains to think of a way round the difficulty. It's a certainty that we took him by surprise, and if he doesn't make some response by twelve o'clock he's in for an even bigger surprise."

Bart Nasmith wandered across to the normal short-wave radio equipment and switched it on, but there were no programmes being broadcast from Earth. Several times in the past two hours he had tried to make contact, in an effort to gain some idea of what was happening, but each time he had failed. A subsidiary equipment tuned to a main beam was wide open, and had been ever since the ultimatum had been sent forth. It was on this beam that Blair would respond — if at all.

"Queer we don't hear something," Bart commented. "Even if the world is falling to bits radio ought to be in action, if only giving orders to the people."

"I don't think so," Frank replied, glancing at Bart over his shoulder. "After the ultimatum I expect Blair would clamp down a negative shield over all radio communications I imagine the neutralising effect would be widespread enough to prevent us hearing anything. We cannot——"

"Joseph Blair speaking!"

Instantly all three men became intent as the subsidiary speaker on the radio beam came unexpectedly to life with Blair's unemotional, incisive voice booming forth.

"Joseph Blair speaking. I have a communication to give you but first inform me if I am being received. Over."

"Message received," Frank said into the microphone. "Carry on!"

A pause, then Blair spoke again. And as usual he came straight to the point. "The ultimatum to the Earth was received, Hurst, and heard everywhere a radio was switched on. That ultimatum was either given by a scientific power speaking *through* you, or else you and those with you are three traitors, whom I dispatched into space on a trial flight in return for their lives. I was prepared to keep my word when you returned, and I fully believed you would keep yours. I was wrong. Your lives are now forfeit if you should ever reach Earth again. I consider I am no longer required to honour the bargain I made with you.

"You gave me an ultimatum, and now I shall give you one. Come to Earth in your projectile and give yourselves up, when I may be inclined to leniency if I am satisfied that you are not acting of your own volition. If you do *not* give yourselves up I will deal with you, and your machine, in whatever way I see fit without further warning. Over."

"Message received," Frank replied curtly. "Not one word of what you have said, Blair, is of the least interest to us. But I would warn you that if you attempt to capture us you are in for a big surprise." With that Frank cut off

the communication and glanced at the clock. It was 11.30.

"He must be crazy," Dick growled. "Here are we, two hundred miles out in space. How does he suppose he can come and get us?"

"I don't quite know," Frank responded slowly, "but of one thing I am certain. Blair is not the kind of man to make an idle threat. Maybe he has more resources than we know of with which to implement his pledge. We'd better be on the alert!"

Dick got to his feet impatiently. "Look, man, what the devil are we waiting for? We know now which way the wind is blowing. Delaying until twelve o'clock is a sheer waste of time."

"Probably so, but it's ethical."

"Ethics be damned!" Dick snorted. "It's simply giving Blair a chance to do as he likes and attack us——"

"But he can't, man!" Frank spread his hands. "You just said so yourself——"

"You're wrong, Frank—dead wrong," Bart said, peering through the main window. "Unless my eyes are going back on me, there's quite a number of space machines coming up to make themselves a nuisance."

"What!" Frank got up quickly and looked over Bart's shoulder. Behind him, Dick looked too. There was no denying the fact that about twenty pencil-shaped objects were hurtling upwards from Earth in the morning sunlight, becoming larger as they neared the fringe of the atmosphere where it merged into outer space.

"From the look of things," Dick said, his face grim, "Blair has been holding out on us. I didn't think he'd got any space-machines except the one we used."

"Depends whether their pilots know what they're doing," Frank replied tensely. "If they do, there's enough of them to cause trouble." He stopped talking, frowning worriedly. "I've no mental instructions as to what to do in case of an attack, because I never expected any. Paralysing the unprotected populace wouldn't have been difficult, but whether

we can penetrate these machines is another matter—— Do our best."

"I'll take this set of guns," Bart said, diving across to the nearest bank of paralysing instruments.

"You take the other lot of weapons," Frank instructed, glancing at Dick. "There seem to be ordinary beam-guns and disintegrators—— Do what you can. I'll try and give this bunch the slip."

He hurried into the control chair and snapped on the power switches, setting the machine on the move. Below, the score or so of defenders had come considerably nearer—and what was even more alarming, they had crossed the atmospheric limit into space and were still coming on.

"Evidently they have learned all the tricks," Frank said, watching them as he darted his own spaceship away. "Or maybe our successful leap into space taught Blair enough to instruct his pilots how to do it——"

"And they can travel!" Dick put in anxiously. "Are you getting maximum speed out of this crate, or is it possible that they can move faster than we can?"

For answer Frank pulled the power lever further and further towards him until at last it was in its highest notch—but he very soon had to slacken off again. Moving at such a titanic velocity was too much when it was essential to stay upright and watch the weapons as well. Lying down it would have been endured, but not otherwise. In consequence, with the drop in speed, the score of following machines managed to keep a constant distance.

"What sort of a game is this?" Dick demanded. "We're simply running away, Frank. Turn round and let's wade into them."

"I think he's right," Bart added.

Thus outnumbered Frank swung the machine's nose round and the vessel arced in a mighty U through space—then with terrific velocity it began to hurtle towards the advancing machines.

"That's more like it!" Dick cried. "Here we come——"

He waited until he had the centre of the fleet in his sights, then he released the beam-guns and disintegrators. Though the deadly amber pencils struck directly into the fleet they did not succeed in destroying any of the machines. The only result was to create a tremendous rebound, the concussion of which must have knocked the men inside nearly senseless—— Otherwise it was wasted effort.

"I don't get it," Dick muttered, staring. "The beams ought to have carved them to bits!"

"As I keep on saying, Blair is a good scientist," Frank remarked. "He's evidently devised a metal for his machines which can stand up to ordinary weapons. Try your paralyzers, Bart, and see if they can penetrate."

"Okay—swing this kite round a bit."

Frank obeyed, sweeping the vessel down beneath the bellies of the onrushing fleet. Bart waited his opportunity and then flashed twin paralysing beams into action. He had not the least doubt that he gave the instruments one hundred per cent output, but apparently there was no result since the fleet — now to the rear again — kept on moving steadily, and it certainly would not have done if those in control had lost the power of movement.

"No good," Dick said bitterly. "There's a metal in those machines which blocks radiation of any sort — and I suppose it should really since it's made to stand up to outer space where radiation is the biggest problem. We'd—— Look out!" he yelled.

In that second Frank realised the mistake he had made in dodging *under* the fleet for it gave the floor weapons of the defending machines every chance they needed. They rained down a battering ram of beams and small but powerful bombs which pin-pointed Frank's machine with deadly accuracy.

Such was the vessel's construction, however, it repulsed the attack made on it, but Frank could not help a steady loss of altitude. Every time he tried to rise the onslaught rained down on him again so finally he took the only course and

went into a breath-taking power dive down towards London spread out below.

"What's the idea?" Dick demanded. "If we once hit London what's left of us won't stand a chance."

"We stand a better chance than trying to get away by going up," Frank retorted, gazing intently through the outlook port at the swirling pattern of the city growing slowly larger on the mighty map of the British Isles. "We've been caught by this attack and had no plans formulated to meet it. My idea is to get above London as quickly as possible and turn our paralysers beams onto whoever might be below. That should give us a chance to land in peace."

Dick and Bart did not say anything to this, but the more they came to think about it the more they saw it was the only possible method. To have been given knowledge of a plan of attack — together with a mind impression of how to control the various instruments and weapons—was one thing, but to run slap *into* an attack was another. Their only course now was to use their own initiative, or at any rate Frank's since he was the acknowledged leader.

He kept on power diving with dizzying speed, leaving the pursuing space machines far above — but they, too, by degrees, were swinging over and coming downwards, several hundred miles behind.

Abruptly Frank's machine hit the outermost fringe of the atmosphere and the scream of it as he knifed downwards at terrific velocity penetrated the insulated walls and left a dense track of condensation in the rear. It acted as a smoke-screen, spreading under the upper air currents. The control room began to become uncomfortably warm and the sensation of incessant headlong falling was producing an uncomfortable dizziness. Far below, London was growing— Bigger, and yet bigger, the buildings taking on shape, the streets separating themselves from the general grey and black pattern—

"Okay, Bart," Frank said abruptly. "No better time than now to use your paralyzers. There seem to be some

people in the streets. Whether they're on our side or Blair's makes no difference. Let 'em have it."

Bart angled the projectors round until he had the canyons of the streets below directly in view. He switched on the telescopic sight and the blurs in the streets took on the formation of human beings and vehicles, most of them probably evacuees, or else Blair's own men engaged on various tasks——

Bart pressed the release buttons — and nothing happened.

"Come on, come on!" Frank urged desperately. "What in heck are you waiting for? I'll be at the end of this power dive in no time——"

"They don't work," Bart snapped back.

Frank could not take his eyes from the port, but Dick did. He frowned as Bart tried the paralysers buttons again without effect, then he looked at the gauges.

"No wonder!" he said.

"What's the matter?" Frank demanded. "What's *wrong*?"

"Everything. All these weapons are linked to the power plant which operates through cosmic radiation instead of atomic force. In the atmosphere here we're shielded from the main inflow of cosmic radiation, just as cosmic rays are shielded when at the surface of the Earth. We've only about ten per cent. of the power we had beyond the atmosphere limit."

Frank compressed his lips. In the ordinary way Dick would never have been able to have worked out such a theory, but with his newly acquired scientific gifts he found it no effort. And he was correct. The blanket of the atmosphere had cut off the machine's basic source of power and it was mainly falling now by its own weight and velocity without actual impetus.

"Which means we're sunk," Frank said bitterly. "This kite can only work with maximum efficiency when it's in outer space — something *else* we didn't think of."

"I can use the disintegrators and heat beams perhaps?" Dick suggested.

"Most unlikely if the power is that much down. And in any case I'll have no part in indiscriminate slaughter. No, I'm afraid we've lost the initiative through a series of factors we hadn't taken into account."

Just how weak the power was Frank soon discovered when he came to try and cushion the machine's steady fall. So depleted was the repulsive force from the forward jets he only just managed to slow the vessel down soon enough to prevent a headlong smash-up. Levelling out he sped across the shattered city towards the location of the airport and finally settled there in the normal way. The faint buzzing of the power plant stopped as he switched off.

"The engineering of Ixicon and his ancestors may be brilliant in some ways, but in others it just smells," Dick declared savagely. "How the heck is one supposed to run a machine which loses its efficiency when it gets into an atmosphere?"

Frank did not answer. He sat thinking and looking at the control panel intently. Presently he spoke:

"I don't think the Vulcanian science is at fault, Dick, because I don't believe they *would* make a machine which can only operate efficiently in outer space. The mistake is in us somewhere. Probably there was something we should have done and didn't. Probably, too, the brain-impression we each received did not include that in its formula. Whatever the answer, we're here — and licked, I'm afraid."

Bart moved restlessly, examining the dials and the equipment with the eye of an engineer. "There must be a way of making this bus efficient," he insisted, taking up Frank's theme. "Otherwise, we'll never be able to get up from the ground — provided we ever get the chance again. I wonder if . . ."

He paused, his attention caught by the power-plant at the rear of the control room. Going over to it he stood contemplating a pointer affixed to a numbered "half-moon" dial, the numerals running from zero to 100.

"Anything in your mental acquirement which explains this?" he asked, looking at Frank and Dick, but they both shook their heads.

"No," Frank responded. "I've noticed that gadget, of course, but since I don't know what it is for I didn't tamper."

"Then I'm going to," Bart decided. "It's connected directly to the heart of the power-plant, and as an engineer it seems to me it has some vital bearing upon it. The least we can do is blow ourselves up, and in our present pickle that won't matter much. We're also grounded in any case, so any chance is worth taking."

He took hold of the pointer and dragged it across to the 100 mark from the 0 cipher, but before he had the chance to experiment other things happened. The short-wave radio, on the direct beam, came into action and Joseph Blair's voice came through.

"You would have done better, gentlemen, to have complied with my wishes earlier. Since you did not do so you cannot blame me if I do not feel inclined to extend leniency. I wish to question you and determine if you are acting on your own initiative or for some power back of you. Leave your machine immediately or else stay within it and leave yourself open to an onslaught you will never survive."

"Try your power plant now," Bart urged. "It's the last chance, and it may come off. I'm sure my guess is right."

Frank promptly switched on and it was no quavering thread of current which started up the plant: it was a blasting roar that increased to a shrieking whine as the queerly fashioned armatures spun with flawless precision.

"It works!" Dick yelled in delight. "We've got maximum power on only the first notch — and deep in the atmosphere at that. How did you work it out?"

"I didn't. Guesswork, with a smattering of engineering foresight. No machine could be built to work in only one place — not by the Vulcanians, anyway. Somehow this pointer thing causes the plant to function as powerfully as in outer space. Maybe it sends out a dissipating beam or

something down which channel in the atmosphere the cosmic radiations can come——"

"I am waiting for your answer, Pilot Hurst!" barked Joseph Blair's voice.

For answer Frank gave a grin and swung the controls which lifted the machine with smooth grace from the ground. He would undoubtedly have hurtled thereafter into the depths of space at ever gathering velocity, but the bad luck which seemed to have been dogging him was still present.

At the identical moment he took off the first of the fleet of pursuing space-machines was sweeping in to land, coming in from the rear. The pilot, never expecting the invading space-machine to abruptly take off, had no chance to save himself. He struck the rising machine with terrific force, shattering the prow of his own vessel and smashing in the side of Frank's machine. It did not entirely break, however. A curious elasticity of the metal prevented an actual fracture.

To Frank, Dick and Bart it was as if a bomb had hit them. One moment they were smiling triumphantly at their smooth take-off — and the next they were flung violently across the control room with the immensely resistant walls bending and creaking towards them. Utterly out of control the machine spun round, hit the half-shattered airport edifice, and then crashed to the ground. Not that Frank, Dick or Bart were aware of it, the concussion having knocked them unconscious.

* * *

Frank stirred back into life and looked at the moon sailing high in the sky. At least that was what he took it for at first until struck him that the "sky" was unusually white and shiny. Then by degrees it occurred to him it was a highly polished ceiling and that the "moon" was an ordinary shadowless globe.

He stirred weakly, aware of bandages about his head and

chest. Opening his eyes he saw a blurred array of faces which gradually came into focus as he blinked. He found it by no means stimulating to discover Joseph Blair and several white-coated medical men eyeing him dispassionately.

"He'll be all right now, Mr. Blair," one of the white-coated men said. "We can leave you to talk to him."

"Thanks."

The medical men retreated and distant doors closed. Frank found the eyes of Blair fixed upon him. They were relentless. "I have not restored you to life, Hurst, for the joy of having you around," he said deliberately. "Just for one reason only — to find out what you discovered and what you did when I sent you on that test flight into space. When you have told me all I want to know you will die, because that is the only proper treatment for traitors!"

Frank lay silent, too weary to pass any comment.

"In your bid to escape, my friend, you cracked your skull and broke your ribs. You also suffered severe concussion. That was quite a few days ago, and now you are on your way to recovery. Your friends did not suffer as badly as you. They have been patched up and at the moment are imprisoned elsewhere in this hospital."

"But for colliding with that other machine I would have beaten you by this time," Frank muttered.

Blair straightened up a little, a gleam in his eyes.

"That is all I wanted to know! You are *not* under the control of some other power, as I at first suspected when you broadcast your impudent ultimatum. You are in complete possession of your own will."

"And shall continue to be," Frank retorted, gathering a little strength. "You haven't finished with me, Blair, by a long way. I intend to——"

"What you intend to do is of little interest: it hardly can be since you, and your colleagues, will soon be dead. When you were out in space you flew as far as that Copper Globe, did you not? And found that greatly advanced type of spaceship in which you flew back to Earth?"

Since he saw nothing to be gained by denying the fact Frank gave a nod.

"Just where *did* you find that spaceship? Even more important, how did you acquire the knowledge to fly it? I have examined it whilst you have been unconscious and, though my knowledge of science is hardly negligible, I failed to understand a tenth part of the intricacies involved. You do not strike me as a brilliant scientist, Hurst, so what is the answer?"

Frank hesitated for a moment, wondering if Blair could be tempted to fall into a trap.

"I was given all the information I needed in the Copper Globe. We found a way into it and discovered a spacial laboratory with not a soul alive. Every conceivable attribute of science which one could wish for. There were enough resources to enable us to master the Universe itself."

"And?" Blair asked, too wary to have fallen up to now.

"We took one of the several hundred space machines we saw, but, not knowing how to fly it, we had to discover a way. In the end we came upon an apparatus which magnetically impressed on our brains all the information we needed to know. Had we stayed longer we could doubtless have learned enough to make all three of us super-geniuses—but instead we decided to return to Earth with our new-found knowledge."

"And overthrow me and reinstate Luther Andos? A laudable scheme, Hurst, had it worked. I understand that the plans you found so mysteriously, and which I confiscated are designs of machinery capable of saving this planet from destruction?"

"Exactly."

"Which machines you understand?"

"Not altogether," Frank responded, truthfully this time. "We had not the time to learn as much as we would have liked. We understand the machines as a man understands electricity— We know what the machines do, but we do not know what they *are*."

"Neither do I," Blair answered grimly. "And I have no guarantee that what you tell me is correct. It is just possible that if I had these machines built and started up I might find a new type of weapon ranged against me, which is one chance I do not intend to take."

"Weapon?" Frank repeated, trying to sit up. "How could such a thing be possible?"

"It could be possible in various ways, Hurst. I have never yet learned to my satisfaction *where* you found those plans in the first place, and what I have seen of your activities since convinces me that you are not just the airman you seem to be but a brilliant scientist against whom I must guard myself."

"That's ridiculous!" Frank declared. "What I know of science in the ordinary way wouldn't cover a sixpence——"

"Yet you managed to fly that super space machine which I cannot understand in the least?" Blair shook his head. "I have formed my conclusions about you, Hurst, and I do not believe that the Copper Globe is responsible for a sudden acquisition of scientific knowledge on your part. I believe you may have come *from* the Copper Globe in the first instance and are trying to lay the foundations of some kind of conquest."

Frank sat back again, too astonished to comment.

"There are so many indications," Blair continued. "You were the first man to notice what was happening on Earth here in the matter of orange colour. You were the *only* man to find a set of plans for complicated mechanisms. You were the one man who volunteered to fly into space, and you accomplished the trip to perfection. Why? Because, I believe, you have crossed space many, many times and therefore it had no terrors for you. I think you desperately wanted to reach that Copper Globe—maybe for new scientific apparatus, maybe for a good space machine, or—remotely—maybe to consult those who sent you here as an emissary." Blair leaned forward. "From all of this, Hurst, I draw the inference that you are an Earth man in shape

only, but otherwise belong to another world which is determined to smash this one and control it—either through the medium of falsely induced earthquakes, or by the erection of mysterious machines which, once released, would probably give you all the power you need to further your own ends.

"From what world you have come I do not know—possibly from Venus, which seems immune at the moment from the troubles begetting the neighbouring planets. Perhaps you are a Selenite. None of that concerns me. I am satisfied that you are an interloper, using the cause of Luther Andos merely to further your own ends and bring to yourself an army which will rise against me. You could not possibly be more wrong in your ambition, my friend."

Frank still did not say anything. He was marvelling that any man could go so far wrong in his deductions as Blair had done. And yet it was possible to see how he had been led astray by a string of unusual incidents.

"You believe," Blair said, gripping the bed rail and looking down on Frank intently, "that I might be tempted to go and explore this Copper Globe because of the resources you claim it possesses. You think you have whetted my scientific appetite? I am not quite the fool you imagine. I know only too well that if I went there I might find supremely clever scientists against me who would obliterate me instantly. No—I shall stay on Earth and keep to my original plan. Space machines will be built in the hundreds of thousands to remove the populace to safety—those at least who are worthy of removal—and if any attack is made by contemporaries of yours from the Copper Globe I fancy it can be dealt with as you were dealt with."

"Listen, Blair!" Frank sat up urgently. "Forget for the moment that we stand for different ideals, that we are enemies. Let's get things on a man to man footing."

"Meaning?" Blair waited, his mouth set.

"Meaning that I've got to correct you on a few things. In spite of what you may think, I am as much a man of Earth as you are, and those machines, if built, *will* save the world from destruction. You've got to believe that!"

"Sorry." Blair shook his head. "I prefer to pin my faith to evacuation—and I'll deal with you when the doctors tell me you are able to get about."

With that Blair gave a final appraising look, then he turned and left the small private room. Frank watched the door close and for a moment or two lay with his fists clenched.

"If ever I had genius wished on me I need it now," he muttered. "I haven't the physical strength to do anything tough, and my brain feels full of cobwebs. The way Blair's going on nothing can save Earth disintegrating suddenly within a few weeks."

He was not quite sure why he talked to himself in this way but he imagined it was the escapist urge within him. Hence his tremendous surprise when he heard somebody answer him from nearby.

"The problem is simpler than you think, Frank Hurst."

Amazed, Frank turned his head slowly and at length found himself gazing at a shadowy image in a corner of the room. It was the nearest thing to the popular conception of a ghost he had ever seen—a perfect example of double exposure with the big screen and the wall visible behind the image. And the image was that of Ixicon.

"How in the name of cosmos did *you* get here?" Frank demanded, raising himself on his elbow, and there was a duration of a second or two before the image replied.

"Do not speak so loudly, my friend, if you do not wish others to hear you. You surely did not imagine we would allow you to run into difficulty without trying to help you, did you?"

"That's just what I *did* imagine! You said that if we got into trouble we'd have to get ourselves out of it—that everything was up to us."

"In a sense that is true insofar as we are not able to help you physically until we can build another space machine—if such a course be necessary. But we are—and have been—constantly in touch with you mentally. Our instruments are tuned to your thoughts and we know

exactly what is happening to all three of you. When you went into the range of the mind-impressor your brain frequency was automatically registered, which has made it possible for us to keep track of you ever since you left us."

Frank glanced around him anxiously, fearful that any moment one of the hospital staff would come in. Evidently his thoughts were immediately read for after the gap of time — which signified the fast-as-light trip of his brain frequency to the Globe and back—the image said:

"Should anybody enter, this image will immediately be extinguished: have no fear. As to you, and your comrades, you have a mission to fulfil, not only for your own sake but also for those of the long dead scientists who created you. When you have done your work we can do ours, and so cease to exist. You had your instructions. When you have the machines completed you will make radio contact with us. That, now, will not be necessary since we are tuned to your mental wave-length. We said radio in the first instance in case any hitch in tapping your brain frequency occurred."

"As far as building machines is concerned, it's out," Frank said bitterly. "Right out! You must be aware of the situation if you have followed my thoughts."

"Perfectly aware, but you are too prone to accept your physical limitations. You believe that crushed ribs and a battered head are stopping you being active. You have forgotten that you have been given mental power sufficient to rise over the dead clay which you call your body. Move, my friend, and dress. You will find you are quite capable of doing so."

Though he felt anything but, Frank carefully levered himself out of the bed and, to his astonishment, he realised that his dizziness had left him. The very act of moving seemed to have restored his strength and the cramping pain of his crushed ribs had also dissolved. How much of the miracle was due to his own mysterious mental powers, and how much to the beneficence of a scientific workshop

200,000 miles away he did not know. He began removing his bandages.

Finding his clothes in the small wardrobe he donned them quickly and then glanced towards the image which was still in the corner.

"Your colleagues are in rooms either side of this one," the image said. "But you will not be able to get at them without door keys. You must make contact with Dr. Salisbury, who is at present in the Dispensary in the middle of the hospital. He is the only one with keys to the rooms, barring Joseph Blair. Salisbury should not prove a difficult proposition for you. He may even connive with you when he knows your aims——"

"A moment," Frank put in, a puzzling question occurring to him. "How do you speak to me? Or *do* you? I seem to *imagine* what you say more than actually hear it."

"That is more than possible. You are receiving mental impressions over a radio beam, just as a radio picks up a voice."

"I see. It just made me wonder—— And how do you suppose I am going to get at my colleagues and Dr. Salisbury without being immediately seen and flung back in bed? Or even killed? Blair has made no secret of the fact that he intends to deal with me later."

"Physically, as I have already said, we cannot help you, so the issue is up to you. You have your strength back, and your friends are quite normal—so between you use your ingenuity to defeat Blair, reinstate Luther Andos, and then get those machines built! That is the essential thing. You will be surprised when you use your brains to the full, how many ideas will occur to you to give you the victory. And don't forget that you have the initial advantage of surprise."

"True, but——" Frank stopped and frowned as he saw the image fading. When it had entirely gone he had never felt so utterly alone in all his life.

CHAPTER SEVEN

Suddenly the door latch clicked. Immediately Frank swung round and at the same moment one of the doctors he had seen at his bedside upon his initial awakening came in. He took one stride and then paused in amazement.

"Are you crazy, man?" he demanded. "Broken ribs, cracked head——"

"Concussion and all the rest of it," Frank finished. "I'm okay. Never better, and I've work to do."

"But I can't allow you to go——"

"You've no choice, doctor. I'm going. And I wouldn't advise you to try and stop me."

The doctor frowned. He was only a youngish man and by no means unpleasant to judge from his general manner. Then Frank asked a question.

"Where's Dr. Salisbury? Still in the Dispensary?"

"Why, yes—— But how on earth did you know he was there?"

"Never mind." Frank gripped the man's arm. "Listen to me, doctor. I don't know what kind of a tale Blair has told you about me, but this much *I'll* tell you. I'm the only man—along with my two colleagues—who can possibly save this planet from smashing to pieces in the very near future. The more you hinder me the more likely becomes your own extinction, or else transportation to another planet which, at the very best, will hardly prove a pleasant undertaking."

"Blair is already speaking of evacuation," the doctor said, "and we have no choice but to fall in with his plans since he is the leader——"

"He isn't the leader by the choice of the people. He's an interloper, and you know it as well as I do."

"At least he is an Earth man."

Frank gave a wry smile. "So he's spreading *that* tale around too, is he? Believe me, I'm as earthly as you are, doctor. I was born in Nottingham and if I had the time you could have my birth certificate—— What I'm beating up to is this: I need all the help I can get. Blair *must* be deposed. Spread that news wherever you can. Now I've got to move."

The doctor made no effort to prevent Frank departing so he slipped out into the corridor and hurried along it. He believed that passing through the double doors at the other end would give him egress to the staircase, but in this he was wrong. He had come into the enormous main surgery, deserted at the moment, its great shadowless globe clusters extinguished.

He was half way across it towards the exit door when a thought struck him. He was in need of some kind of weapon, and true to his instincts he had no wish to use anything vicious enough to bring death—but there was the ether cone, a completely modern one with a switch on the side which made the instrument eject a limited cloud of anaesthetising gas. He hurried over to it on its tripod stand, unscrewed it, then carried it in his hand. The surgical case with its array of grim looking knives he ignored.

He had found the exit and was half way down the stairs, cone in hand, when it occurred to him that to take the cone had been a genuine inspiration. Perhaps Ixicon had not been so far wrong in his statement after all.

Suddenly, as he reached the lower floor, Frank found himself face to face with a nurse. She stopped, looked at the ether-cone, then at him.

"Aren't you——?" she commenced, then Frank cut her short.

"Where is the Dispensary, nurse?"

"Straight down the corridor here, but——"

"Thanks. And if you're wondering about me see the doctor I just left in my room. He'll explain."

Leaving a much puzzled girl behind him Frank hurried on his way. Silently he entered the Dispensary and to his satisfaction there was only one man at work within it—a middle-aged individual with a kindly enough face, stooping over an array of bottles.

"Dr. Salisbury?" Frank asked briefly, and with a start the medico glanced over his shoulder. His eyes widened, then moved to the ether-cone.

"Hurst!" he ejaculated. "Patient from Room 58. What in the world are you doing here—and with *that*?"

"*This*," Frank emphasised, "is my one means of getting what I want. I believe you have the keys to the rooms containing my two colleagues?—Nasmith and Meredith?"

"Yes, I have, but——" Salisbury's eyes strayed to the shelf in front of him on which two keys were lying. He had hardly looked before Frank had picked them up.

"Thanks," he said, heading for the door. "That's all I need."

"Look here, Hurst, don't you——"

Frank wasted no time listening. As rapidly as possible he hurried back to the floor above, then paused as he saw two strongly-built white-coated attendants looking about them. The moment they saw him they began moving. Behind them was the nurse Frank had seen in the lower corridor. Evidently she had arrived at the conclusion that Frank was deranged and needed controlling.

Frank waited, though his instincts were to run. Instead he obeyed his inner impulses and the moment the men came within two feet of him he pressed the ether-cone button. His timing made him wonder for a moment for the two men came exactly in range of the stifling gas at the same second.

One of them actually grabbed Frank's shoulder, then released it before a smashing blow under the chin. Frank did not wait for any more: he dashed on down the corridor and the nurse who had been standing watching took to her heels.

To unfasten the doors of the rooms containing Bart and Dick was only a moment's work. They emerged looking somewhat bewildered.

"What goes on?" Dick demanded. "Last I heard of you, Frank, you were laid out completely."

"That's a while back and I'm okay now." Frank glanced about him urgently. "I think part of the staff here may be on our side, but the other half won't. That confounded nurse you just saw disappearing will see to that—There's proof of how she feels." And Frank nodded to the two unconscious attendants at the further end of the corridor.

"What do we do? Where do we go?" Bart demanded. "Up to you——"

"We've got to reach that space projectile of ours at all costs. It's our only chance to gain the mastery. I gathered from Blair that he hasn't moved it because he doesn't know *how*, so it ought to be where we left it——"

There were sounds on the hospital's lower floor. Excited voices and running feet. And presently the voice of Dr. Salisbury, excitedly determined.

"I tell you he took the keys! He must be on the upper floor——"

Frank looked quickly around him, then turned as the doctor who had entered his own room came out of there.

"I waited to see if you came back," he explained. "I'll help if I can, Hurst, but——"

"All right then—— Stall off these folk on the lower floor and tell us the quickest way out."

"The roof. Emergency staircase round the next corner. Hurry."

Immediately the trio began moving, getting out of sight

round the corner before those from below had a chance to see them. What story the friendly doctor told the pursuers they did not know, but certainly there was no immediate sign of their being followed.

The staircase was of the metal spiral variety and took them straight up on to the building's flat roof. From the look of the sun it was mid-day and, since this building was higher than most of the others they had an excellent opportunity to study the lay-out.

Mostly the scene was that of smashed buildings and debris-choked streets, a fire still burning here and there, left to die of its own accord. Down below lorries were on the move, most of them carrying people or possessions out of the city before another and perhaps final earthquake wrecked it altogether, or else swallowed it up.

"There's the airport," Dick said abruptly, pointing. "To the left there."

Frank nodded, shading his eyes from the sun. "Mmm—and a good two miles away. We're going to have a rough trip to get there. We can't even leap from roof to roof with half the buildings being down—— All right, come on."

He threw away the anaesthetic-cone since it would hamper his movements and began running over the broad stretch of roof. When he got to the parapet he stopped, listening to a series of alarm sirens coming into life until they were screaming from a dozen different points of the city.

"What do you suppose that's for?" Dick asked anxiously. "Us?"

"Maybe — or else warning of an earthquake, though I don't see how anybody could anticipate that. No time to lose."

Frank scrambled over the parapet and began to lower himself until he reached the top of the fire escape ladder, then he went down it as quickly as possible with Dick and Bart scrambling in quick descent from above him.

The moment they reached the street they discovered what

the sirens were sounding for. There was a sudden concerted rush of uniformed men towards them, men who had apparently been on the look-out and had waited until the three had finished their descent of the ladder.

"Figure this out how you can," Frank said briefly, as the men came running down the street with their weapons levelled. "The fact remains we've got to reach that airport——"

Even whilst speaking he was glancing about him, and at the last words he made a sudden dive for a truck full of evacuees which was grinding past. Bart and Dick followed his action at the same moment, swinging onto the truck's open back and then climbing up inside it. The guards halted, surprised by the move, then they started shouting to the driver. But he never heard them. The noise of the truck's engine, one of considerable age, drowned out the cries.

Within the truck Frank looked about him on the men and women sprawled around under the canvas top, some of them with their possessions. Since they had not the least idea who he — or Dick and Bart — were they simply assumed three more men were trying to escape from the city and so took no particular notice.

"A close thing, but we made it," Dick murmured, as the truck moved on at a good twenty miles an hour, following a track which had been cleared specially for traffic. "I still don't quite know how we managed it so easily."

"Good fairy watching over us maybe," Frank responded, and grinned at the vision of the guards in the distance as they gave up the struggle to try and catch up with the truck.

This particular means of transport, however, did not serve its purpose for long for the truck turned a corner and went in the opposite direction to the airport. Immediately Frank made a move to the rear of the crowded space, the men and women looking at him in surprise.

They were even more surprised when he leapt down into the roadway and Bart and Dick followed him, all three of

them stumbling for a moment before they managed to recover themselves.

"Clear enough here," Frank said, with a quick glance around him. "Come on——"

From their position in the centre of a ring of smashed edifices they could see the tall towers of the airport with its radio masts, so they began hurrying towards it, using every small street they could find, climbing up piles of rubble, floundering ankle deep through stones and loose chippings, crossing devastated areas that had once been occupied by massive buildings.

Their journey was not made without encounter with other people for ever and again they came upon homeless wanderers on the move, either searching for a place in which to live or else heading out of the city. Such people as these were no trouble: it was the guards who were dangerous, though evidently they had received orders not to kill otherwise the guards would not have hesitated to do so.

"Sirens have stopped," Dick remarked, as he hurried along behind Frank and Bart. "Probably given us up for lost——"

He broke off, for just as he had uttered the sentence a group of guards came in view ahead. In fact it was more than a group—there was a long line of them, growing as more guards appeared from amidst the tumbled buildings.

Frank came to a stop and glanced about him. To each side, and the rear, were more lines of guards, all of them converging inwards in a narrowing circle.

"No wonder the sirens have stopped," Bart said. "This crowd have let us walk straight into a trap and then closed in——We can't fight this lot, Frank."

"No—but maybe there's another way. Take a look there—a sewer opening or something. It's our only chance."

Without troubling to say any more Frank dashed forward to it. It was a big metal cavity, and the cover was missing—probably thrown aside by frantic people who had dived below during the past convulsions, or else blown out by

inner pressures. Not that Frank was concerned with reasons: he grabbed hold of the descent ladder and nearly threw himself down it into the depths. Bart, who came last, found himself seized just as he began to descend. Instantly he slammed out his right fist, taking the guard who was holding him clean under the chin. The grip relaxed and Bart tumbled down into the depths.

He finished up knee deep in fast moving sewer water and hurried as rapidly as he could to where he could hear Frank and Dick sloshing ahead. There came the sound of the guards in pursuit and the gleam of their torches split the darkness.

"Stop, or we'll shoot you down!" one of them shouted.

"Keep going," Frank panted, with a brief glance over his shoulder. "My guess is that Blair doesn't want us hurt—and I hope I'm right."

Evidently he was not, or else the guard was over zealous, for there came the crack of a long-distance protonic gun and pieces flew out of the stone wall at Frank's side.

"No use, Frank," Bart insisted. "We've got to stop. We'll be finished if we don't."

"And if we do," Frank retorted. "You don't suppose Blair will have a red carpet out for us when we're hauled back to him, do you? If we've got to pass out we'll do it trying—Up here!" he broke off sharply, and plunged into a subsidiary tunnel.

Though it was totally black he plunged onwards desperately with Dick and Bart pounding in the rear. The water here was less deep and not nearly as slimy, so they had a better grip on the floor.

"Here they come!" Bart gasped, as the torch beams began to appear to the rear and the echo of feet was thrown back from the curved walls. I tell you this is hopeless, Frank! We don't even know where we're heading!"

Some instinct made him dodge to one side as he finished speaking, and it was as well he did so for the searing pencil of the long-range gun flashed so close to his ear he felt the

heat it generated. He swung round in anger, staring into the blaze of torchlight—then apparently the world came to an end.

Without the least warning the din of a thousand Niagaras cannonaded through the sewer tunnel, drowning out footfalls and the sound of water, drowning out everything indeed in a raging chaos of sound.

The shifting torch beams vanished. Walls bent inwards in the dark, the ground swayed and rocked and then split. Separated from each other, Frank, Dick and Bart could only look each to his own safety and for what seemed an interminable time they were flung back and forth in the dark, striking the walls, being hit by descending stones and metal work, being thrown off their feet every time they tried to rise.

Then, gradually, the cataclysmic sound began to abate and the rending and swaying became less intense. The darkness had gone, and instead grey daylight was filtering down through enormous rents in what had been the sewer roof. Rain was pelting through the low hanging, fast-scurrying rain clouds.

Frank, half buried in rubble, but not hurt beyond a few bruises, staggered to his feet. He sighed in relief as Bart and Dick also rose up, investigating themselves. Since they were capable of moving they too had apparently escaped serious injury. But of the guards there was no sign. The further end of the tunnel, along which they had come, was blocked by fallen masonry and twisted steel supporting bars.

"Earthquake again?" Bart questioned, and Frank gave a nod.

"Must have been, to have that violence—and it came in handy for us too. Maybe Ixicon was right when he said I'd be surprised how the way would open up."

"Eh?" Dick enquired, puzzled. "When did he say that?"

"His projection visited me—I've had no time yet to tell you about it, but I will later. For the moment let's get

out of here and hope that the airport, and particularly our projectile, are still intact."

Frank turned to the piled-up cairn of rocks beside him and began to scramble upwards. It did not take him long to reach the top, and he emerged into a deluge of rain. The sunlight had entirely vanished, and the sky was in the midst of a gale. He looked about him at the great seams which had been gouged in the ground, then towards scurrying people in the distance. Now the disturbance had ceased it appeared that many hundreds who had evidently domiciled themselves in various parts of the city were again on the move.

"Airport's still standing," Bart said quickly, pointing through the rain. "Maybe the ship is . . ."

He began to run, and Frank and Dick followed his example.

"One thing about this recent earth-shock," Dick said breathlessly as he hurried along, "we may find the people more willing to listen to us when we tell them they can have freedom from this sort of thing if they overthrow Blair."

Frank only nodded, his gaze fixed intently ahead. In more ways than one the earthquake had proved a blessing, for it had set so many men and women on the move that any plans Blair's guards might have had must now be hopelessly upset.

Not for a moment did the three relax in their run, and they reached the expansive grounds of the airport without mishap. Here they found more confusion, chiefly among the ground staff, who were doing their best to salvage two great air-liners which the earthquake had half-flung into a new-born chasm. Absorbed in this job, and with visibility nearly down to zero with the blinding rain and lowering cloud, they never even glanced at the three who made their way, wet to the skin, towards the space projectile which still stood as they had left it.

One by one they crept into it, and Dick closed the airlock and gave a sigh of relief.

"Thank goodness this door can't be locked from the out-

side," he said, "otherwise Blair would have done it long ago."

Frank made no comment—he was too intent on getting away. He settled at the control board and then turned to Bart.

"Check on that pointer thing, Bart," he requested. "You understand it better than I do."

"It's okay," Bart said, going over to it.

Frank nodded and switched on the power. Immediately the plant hummed, then increased its rhythm to a deep-toned roar as the load increased. Gently Frank eased in the main lever and without a quiver the machine swept upwards and into the dense cloudbanks. In a matter of seconds it was through them and burst into the glare of the sun.

"Good protection with those clouds," Frank remarked, "though I hardly think we need it at the moment—or ever. We've got this machine thoroughly under control at last. Now perhaps we can put into operation the plan we had intended when we got ditched."

He brought the machine to a gradual standstill at a height of about twenty thousand feet, using beam projectors to keep the vessel from dropping downwards. Then he turned to the radio and switched it on.

"This is Frank Hurst speaking." And the cosmic power he was using immediately blasted all other transmission down on Earth. "Listen to me, as you did before—and those of you who hear carry your information to those who do not."

Hundreds heard—everywhere a radio was tuned in. Including Joseph Blair. But he was no longer in his controlling edifice. He had only just escaped it with his life in the earth-shock and at the moment was in the centre of the city with his immediate retinue of guards and advisers about him. They broke off their conversation on evacuation plans as the voice roared forth at them from the portable radio.

"Evidently he got away in the finish," remarked the chief guard.

"I can't watch every damned thing," Blair retorted. "You should have organised things better to get him recaptured— We'll deal with him later. In fact we'll have to. He's too dangerous to stay free."

The guard started to speak, but Blair silenced him as Frank's voice resumed over the radio, booming eerily in the shattered expanses.

"I am repeating the information I gave you earlier. This world of ours can still be saved if you overthrow Joseph Blair, but not otherwise. Since that will be an almost impossible proposition for you to handle as things are I shall personally attend to Blair and, later, will call upon you to assist in the erection of a series of machines which can restore stability to the world. From here on many strange things may happen to you, but do not be afraid. I know those whom I can call my friends. And let one thing be understood: I, Frank Hurst, am a man of Earth, and I count every man and woman as my brother and sister. I am not, as Blair may have led you to believe, a being of another world."

Frank switched off and gave Bart and Dick a grim glance as they stood at either side of him.

"I take it that this is it?" Bart enquired.

"Definitely!"

Frank turned to the controls once more and again set the machine on the move. He drove it down through the now dispersing clouds, came below them, and headed for the centre of the shattered city beneath. Then after a good deal of circling he frowned.

"Blast!" he muttered. "I want the administrative edifices so I could paralyse Blair and his gang before going any further. Now I can't find them. Earthquake, I suppose. Wonder where he is?"

"Might goad him into saying something over the radio," Dick suggested. "Then when he does that we'll take a

reading of his transmission point and get its exact position—and his position too, we hope.”

It was definitely an inspiration, and Frank wasted no time in going into action. He switched on the radio again and spoke.

“Frank Hurst calling Joseph Blair. I trust that by now, Blair, you have realised that you have not the power—or possibly even the intelligence—to fight against me! You had everything ranged on your side and yet I got clean away, and I shall stay away. Nor shall I show you any mercy in throwing you from the position you so unrightfully hold.”

Frank switched off again, and Dick stood ready by the detection-instruments. After a moment or two he gave a wide grin of satisfaction as he saw the needle start to swing under the influence of a radio transmission beam from below, at which moment Blair had switched on the most powerful transmitter—of the portable variety—his men had been able to locate.

Frank listened to the first bitter words and then cut off.

“Quadrant Sixteen,” Dick said briefly, and pointed to the exact spot on the map on the charting desk. “That’s where he is. You can nail him whilst he’s letting off steam.”

To do this was not difficult even though practically every normal London landmark had vanished. The automatic control, set on Quadrant Sixteen, set the machine’s own course and it swept downward.

“Get to the paralysers projectors,” Frank ordered, looking intently below—but Bart was already there.

Lower, down towards the battered city. There were no signs of planes or space machines coming up to give battle, either.

“Right!” Frank snapped, as the automatic control and the course needle both synchronised over Quadrant 16.

Immediately Bart closed the switches of the paralysers projectors and stared steadily through the sights at a patch of London below. Here there stood a few buildings which had survived, and in the riven streets around them people

were on the move—but when the paralysing beams struck them it was as though a film had been halted in mid-action, or at least something very much like it. The people ceased moving and instead toppled over and became still. Here and there a lorry careered onwards until it slammed into a wall or pavement kerb.

"For a month that lot will be out of action," Bart said. "That's the amount of juice they got. Better see, Dick, if Blair has stopped broadcasting."

Dick moved to the radio instruments and switched them on again. Upon the waveband which had carried Blair's voice there was only the soft hum of power but otherwise not a sound.

"Looks like we got him!" Dick said, grinning.

"Our next move is to issue radio orders to the rest of the populace and then we'll try and get President Andos back from the Isle of Wight."

Frank took the microphone to him and gave his instructions, which he knew would be picked up by the people. The guards also would get the message, but with Blair out of action and—it was hoped—an incensed populace ranged against them they wouldn't stand much chance.

"Hope for the best with that," Frank said, switching off. "Now for the airfield."

He turned the projectile about and headed back to the airport, landing at its furthest extremity. The ground staff was quite half a mile distant, busy with evacuation 'planes and also still trying to retrieve the machines which had been swallowed on the earthquake.

"You, Bart, will stay on hand here," Frank instructed. "We hope that the people may be swung to our side, but if there are any attacks on you use the paralyzers. Since the people are now without a ruler, Dick and I will go over to where Blair's temporary headquarters are and see what we can do."

"Okay," Bart nodded. "I'll keep in touch by radio—and good luck."

Frank and Dick had an uninterrupted journey to the big building which Blair had taken over for his temporary headquarters. In all directions around the building men, women and children were lying motionless, just as the paralysing beams had struck them down. Guards were amongst them, their eyes staring into the sky.

"Looks like we have a mighty effective weapon in that paralysing," Dick commented, gazing about him. "Wonder if the effect is the same inside the building? I hope so, otherwise we may walk into something unpleasant."

He need not have worried. Inside the building—a general store hastily converted into headquarters—every man was lying flat on the floor, just as they were in the enormous ground-floor room into which Dick and Frank presently came. Here they found Blair and his immediate colleagues sprawled helplessly before the radio equipment with which they had been communicating. The instruments themselves were still functioning since, so far, power had not failed because the paralysis had been confined to only this small section of the city, and power-house engineers were unaffected.

"Get these cleared out," Frank said, "then we can get busy. It puts one off with all these bodies lying around."

"I suppose they can't decompose?" Dick enquired.

"Of course not! They're still alive but incapable of movement."

"Do you suppose they know what we're doing? Can they see and hear us and yet do nothing about it?"

"No idea—and I care still less. Okay, give me a hand."

The task of moving the bodies out of the way into an adjoining section of the great area took half an hour, then Frank turned his attention to the radio transmitter. It had not a very great range, apparently, but he relied on the fact that where it did not reach the message would be carried by those who had heard it.

"People of Britain!" Frank intoned. "This is Frank Hurst speaking again. Because your interests are ours, because you prefer our own Luther Andos in place of Joseph

Blair, because Blair stood in the way of our safety and that of the world, he has been deposed.

"If you doubt my power survey the building which is now being used for administration in the centre of London. Look at the street outside it. It is now up to you. We shall win every time because science is on our side . . . It is your task now to recover President Andos from the Isle of Wight and bring him here. And hurry! Every hour is precious if this world of ours is to survive. In case you should be in any doubt as to which is the Administrative Building you will henceforth find a flag on the top of it."

With that Frank switched off, and though he was unable to see the effect of his words it was none the less immediate. The fact that Blair was out of action and the road open for the return of President Andos started activity in plenty. Though Frank's message had not carried very far in the initial stages it was soon being repeated the length and breadth of the British Isles. And nothing could stop it since those who supported the regime of Blair were now utterly outnumbered.

Those who were nearest to the Isle of Wight did not even hesitate. Defying guards who tried to stop them, mobs of men and women secured what sailing vessels they could find and set off across the Solent. From the guards they overpowered they took weapons and with these dealt with the few men left on the Island to guard Andos.

Four hours after Frank's radio speech President Andos had been brought to London in a truck, protected by the triumphant supporters of his regime, and tired and worn, he was escorted into the temporary headquarters with the tattered flag flying from its roof.

For a moment, as he faced Frank and Dick, he seemed incapable of speech. They both saluted, and at that Andos came forward and grasped their hands. Frank said: "If I may say so, sir, there are matters of extreme urgency. When you have rested and can give the necessary orders I'll explain everything to you. I have the plans, the

methods. All I need now is your co-operation—and that of the people—which I know I will get."

"Surely. As for my resting, I have done so on my way here from the Isle of Wight. Time is too precious for me to think of wasting any of it. We will get down to business immediately."

"Unfortunately we can't," Frank responded. "The plans of the machines we need are still missing, and the only possible place I can think of them being is in the vault strong room under the former administrative building, which the recent earth-shock destroyed. With your permission I would like to make a search whilst you rest."

"By all means," Andos agreed immediately. "I am surprised you didn't search sooner."

"Only because the vaults are State property and, legally, I am not supposed to touch them. However, now I have your permission I can make up for lost time."

Frank hurried out with Dick beside him, and at least half of the army of men and women who had accompanied Andos went with them to lend what assistance they could. It was as well they did for the administrative buildings were buried deeply under the rubble, and it took over three hours, man-handling away debris and masonry, before the underground strong vaults could be reached. These apparently, had survived. Then came the problem of opening the strong-room door, a door controlled electrically in the normal way but now completely jammed.

It took two small atomic charges and a disintegrator another hour to force the door, and after that the going was easy. In one of the dozens of drawers with which the walls of the strong-room were lined, were the plans Frank was seeking. The moment he recognised them he wasted no time in getting back to President Andos.

"I would suggest, sir," Frank said, "that you conscript every available man in this country who has engineering knowledge and get him to work at once. I should put Bart Nasmith in charge of the whole project since he is an engineer by profession."

To everything Frank suggested Andos gave a ready assent, chiefly because he knew he was completely in the hands of his rescuers, but also because he realised their scientific knowledge was far beyond that of his own. Bart was recalled from the guardianship of the space projectile and given his instructions. Throughout the length and breadth of the half shattered country engineering workshops went to work to turn out the necessary machinery. And in other countries the same frenzy of activity began to appear. At long last humanity had realised that if it did not win this fight against time the next earthquake might plunge it to destruction.

Gradually the world became without frontiers and without quarrels: all races had agreed that they must pool their resources and their man-power to fight the common enemy of world destruction.

Despite occasional violent earth shocks, which did not mature into the final cataclysm, six weeks saw the first giant machines commencing to appear, and they were then moved to strategic points so that when every machine was in place not a square mile of the Earth's surface would be neglected. It was a mighty task, one of the greatest Man had ever undertaken—but such is his nature he worked with a will because he knew the alternative was death.

There was also erected a giant radio station for the purpose of radio communication with the Copper Globe, for though Ixicon had said it would not be necessary since he was constantly in touch with Frank himself through mental telepathy, Frank preferred that the orders which came through be heard by everybody all over the world, then nobody could say afterwards that he had handled things for his own personal ends.

So, finally, the machines were ready—the great unbroken chain of them girdling the Earth from pole to pole. There came the fated morning when Frank sat at the transmission panel of the radio equipment, whilst around him stood the President, Bart, Dick, and a host of technicians and high-ups.

Switching on the carrier beam Frank identified himself—and though he knew the radio equipment to be a superlative piece of radio engineering even he was surprised at the clarity with which Ixicon's voice came through in answer from 200,000 miles away.

"We have been observing your activities telescopically, my friends, and we assume you are ready for our part in the programme?"

"Absolutely ready," Frank assented. "You understand that we do not grasp the exact purpose of the machines we have erected? All we have done is follow out the plans given to us and have had all the machines controlled from multiple switchboards with a master-contact right here in this radio power-house."

"You have done rightly. We will release our machines. The potential is now ready. Your machines will pick it up and redistribute it. In the space of twelve hours the job will be done. You have evacuated everybody to safe parts of your planet, as nearly as possible?"

"Yes."

"Very well. In exactly one hour of your time we will release our machines. The mutational effect I described to you when you were with us will then begin. Release your own machines everywhere—now."

Frank gave the signal over the radio, and it was passed immediately to the engineers in the power-house. Round the world, in every part of which Ixicon's message had been heard, went the radio signal, timed for simultaneous transmission. Frank himself pressed the button for the master-switch to be released, and at that moment every one of the engines all over the world started into action.

Frank and his colleagues kept their eyes fixed on the synchronic clock as it sliced off the seconds. When the hour was up the voice of Ixicon spoke briefly.

"The power has been released. The rest is in the hands of the machines you have built. We hope the legacy the Selenites left will survive to reach the heights ordained for it. Good-bye."

"That," Frank said, frowning, "sounded oddly significant. Just as though we heard from him for the last time."

But in this he was wrong. Ixicon spoke again twelve hours later, after Earth had been hammered and twisted inexorably, after nearly every city had been thrown down and the whole landscape repatterned. He spoke when Earth was at last devoid of its coppery light, when pale dawn was streaking through the windows of the giant radio room.

"It is finished. You can start again."

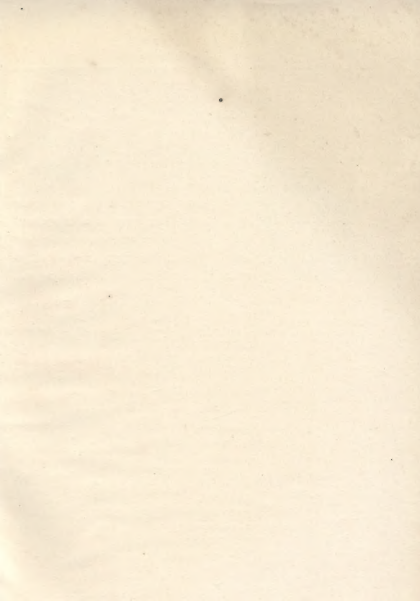
President Andos turned a tired face. "Yes, we can start again," he said quietly. "With certain attributes we did not have before. We have space travel, scientific secrets—"

He broke off and with the others glanced out of the window sharply as there was a sudden brilliant flash in the dawn sky. The entire group was just in time to see the Copper Globe explode in a million flaming pieces.

"Wise to the last," Frank muttered. "They destroyed their deeper secrets knowing that otherwise we could fly there and discover them. They know the insatiable urge of Man to destroy."

There was silence, mute confirmation of how right he was.

THE END



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